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Promoting mental wellbeing in young people: Exploring avenues for intervention

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This thesis is submitted in partial fulfilment of the requirements for the
degree of Doctorate in Clinical Psychology

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May 2019

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List of abbreviations

A8	Attainment 8 score
ABA	Applied Behavioural Analysis
ACT	Acceptance and Commitment Therapy
BPT	Behavioural Parenting Training
CCAT	Crowe Critical Appraisal Tool
CINAHL	Cumulative Index to Nursing and Allied Health Literature
DPP	Deprived Pupil Premium, data from 2016-2017.
EIBI	Early Intensive Behavioural Intervention
GCSE	General Certificate of Secondary Education (academic qualification)
MeSH	Medical Subject Headings,
MH	Mental Health
NHS	National Health Service
PICOS	Participants, Interventions, Comparisons, Outcomes and Study design
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-analyses
PT	Parent Training
RCT	Randomised Controlled Trials
SEL	Social and Emotional Learning
SPSS	Statistical Package for Social Sciences
SSTP	Stepping Stones Triple P (Positive Parenting Program)
TAB	Take a Breath (parenting intervention)
TEI	Trait Emotional Intelligence
UK	United Kingdom
USA	United States of America
WIMD	Welsh Index of Multiple Deprivation

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Acknowledgements

First and foremost, I would like to thank the adolescents who took part in this research for contributing their time, and for their willingness to answer questions on emotive topics. I would also like to thank the schools and colleges who enabled me to recruit young people, and to my gatekeepers who generously supported the recruitment and data collection processes.

I would like to thank my research team who have supported me through my research journey. Lesley, thank you for regularly reminding me of the intent and passion behind this research. This has helped me to hold my enthusiasm for, and ownership of, my work. Magda, thank you for challenging me and regularly asking me to explain my rationale behind decisions. This has helped me to attend to detail and become a better researcher. Claire, thank you for your encouragement and enthusiasm during our discussions. Your reminders about the clinical relevance of my research has helped motivate me on my research journey. And Tony, thank you for your patience and guidance with my statistical analysis, and helping me to derive so much meaning from a set of numbers. I would also like to thank my clinical supervisors, Ray and Rachel, who supported me on placement when it was a challenge to balance my research and clinical work. Crucially, you helped me to use ACT as a guide through this time – this is a skill for life, and I have truly fallen in love with the model. Thank you to my wonderful cohort for all your support and humour – we truly have been on this journey together.

Henry – thank you so much for your patience, belief in me and encouragement, particularly over the last three years – I have needed it! Thanks to our families for the incredible emotional and practical support you have given us both throughout this process, and to our friends for being so understanding and accepting when I've not been very 'present', and for helping me to get some much-needed time out when I have been.

Declaration

This thesis has not been submitted for any other degree or to any other institution. It is a record of my original work that was carried out under the supervision of Dr Lesley Harrison (Senior Lecturer, Coventry University) and Dr Magda Marczak (Lecturer, Coventry University), and was supported by Dr Claire Middle (Consultant Clinical Psychologist, 2gether NHS Foundation Trust). The named supervisors helped me to refine my research questions and the design of my studies. They read drafts of the chapters and provided feedback throughout. The statistical analysis using PROCESS was conducted with additional support from Dr Anthony Colombo (Senior Lecturer, Coventry University). A colleague carried out quality assessments on a portion of journal articles included in the systematic literature review chapter in order to provide a reliability check of the quality assessment process. Apart from the collaborations stated, the content of this thesis is my own work.

Chapter 1, ‘Acceptance and Commitment Therapy for parents: A systematic review of intervention studies’, has been prepared with the view to submit to the Journal of Contextual Behavioral Science. Chapter 2, ‘The role of trait emotional intelligence in relationships between life dissatisfaction, stress and mental health difficulties in adolescence’, has been prepared with the view to submit to the British Journal of Psychology.

Summary

This thesis explores potential avenues for intervention to promote mental wellbeing in children and adolescents. It is known that the majority of mental health problems develop prior to adulthood. These problems cause suffering to those affected and are costly to society. Improving young people's mental health is therefore an important public health concern.

Chapter 1 reports on a systematic literature review of empirical research investigating Acceptance and Commitment Therapy (ACT) as a parent intervention. Fourteen studies were identified based on pre-defined inclusion criteria and a quality assessment process. They were evaluated using a narrative synthesis approach. The findings, based on heterogeneous studies, suggest that ACT interventions can impact parenting style and behaviour, and can increase parents' general and parenting-specific psychological flexibility. It is suggested that ACT has potential to benefit both parent and child wellbeing.

Chapter 2 describes a quantitative study exploring the role of trait emotional intelligence in the relationships between daily hassles, perceived stress and mental health in adolescents. Questionnaire data was collected from 268 adolescents. Young people who reported a greater frequency of daily hassles were more likely to perceive stress and report both lower life satisfaction and more mental health difficulties. Moderated mediation analysis revealed that high trait emotional intelligence reduced the strength of the relationships between stress and mental health, suggesting it facilitates resilience. It is argued that interventions aimed at improving young people's wellbeing might simultaneously target emotional intelligence and daily hassles that lead to stress in adolescents. Implications for the school context are considered.

Chapter 3 represents my reflections on my research journey. I discuss the value of ACT as a tool to facilitate reflection and how it can help bring together the different parts of our personal and professional identities as Clinical Psychologists.

Overall Word Count: 19, 394

Chapter 1: Systematic Literature Review

Acceptance and Commitment Therapy for parents: A systematic review of intervention studies

In preparation for submission to the Journal of Contextual Behavioral Science (see Appendix A for author instructions for submission).

Overall chapter word count (excluding tables, figures, footnotes and references):

7826

1.0 Abstract

In recent years, theoretical and empirical research interest in Acceptance and Commitment Therapy (ACT) as a parent intervention has grown. There is now a need to synthesise emerging empirical findings. A systematic review of published studies investigating ACT as a parent intervention was undertaken via PsycINFO, MEDLINE, CINAHL, Scopus, the Cochrane library and the Association for Contextual Behavioural Science databases. Using inclusion criteria and a quality assessment, 14 outcome studies were identified for evaluation using a narrative synthesis. The majority of studies investigated ACT for parents of children with physical health or neurodevelopmental conditions. The findings, based on heterogeneous studies including a small number of randomised controlled trials, suggest that ACT-based parent interventions may have positive benefits on parenting style and behaviours, parenting-specific psychological flexibility and general psychological flexibility. It is concluded that ACT holds promise as a parent intervention, and its potential to benefit both parents and their children are discussed. Recommendations for future research are made, in particular for further studies in a broader range of contexts.

Key words: Acceptance and Commitment Therapy; ACT; Parent; Systematic Review

1.1 Introduction

1.1.1 Child mental health and the role of parenting

A major survey undertaken in England in 2017 found that one in eight 5 to 19-year olds had a diagnosable mental health condition, representing a slight increase since equivocal surveys in 1999 and 2004 (NHS Digital, 2018). It is recognised that parent behaviour and parenting styles have an important impact on child behaviour and their mental health (Forehand, Jones & Parent, 2013; Raftery-Helmer, Moore, Coyne & Reed, 2016). As such, it is important that services continue providing support for parents and further develop interventions that enhance parenting styles with a view to improving living environments for young people.

1.1.2 Parenting interventions

There are several well-established evidence-based behavioural parent training (BPT) programmes that aim to improve child behaviour and mental well-being by increasing positive parental behaviour and reducing unhelpful parental behaviour (Bellefontaine & Lee, 2014; Forehand et al., 2013; Michelson, Davenport, Dretzke, Barlow & Day, 2013; Reyno, & McGrath, 2006). In particular, BPT interventions that focus on developing warm positive parent-child interactions, emotional communication to help children identify and appropriately express emotions, and disciplinary consistency have been associated with reduced child internalising and externalising problems (Kaminski, Valle, Filene & Boyle, 2008).

Many of these interventions have been criticised due to a lack of attention to context. Parenting can be stressful and additional stressors can reduce parents' ability to utilise effective parenting strategies even when they are aware of them (Jones, Whittingham, Coyne & Lightcap, 2016). Multiple contextual factors including parental mental health, social support and socio-economic factors impact the effectiveness of BPT interventions, and hard to reach groups such as parents with mental health conditions may benefit less from these interventions (Coyne & Wilson, 2004; Forehand & Kothcik, 2002; Jones et al., 2016; Reyno & McGrath, 2006). This is particularly concerning given that the rate of child mental health problems is higher in the context

of parental mental health problems, adverse life events and poorer family functioning (NHS digital, 2018). It is therefore important to explore whether parent interventions that attend to contextual factors such as parental stress and emotional responses to their child can deliver additional benefits over traditional behavioural approaches (Forehand & Kothcik, 2002). Acceptance and commitment therapy (ACT) holds promise as an approach that simultaneously incorporates behavioural and relational approaches to parent intervention (Whittingham, 2015).

1.1.3 Acceptance and Commitment Therapy (ACT)

ACT is a third wave behavioural therapy grounded in Relational Frame Theory, a theory of human language and cognition, and a functional contextualism philosophy (Hayes, 2016). ACT posits that our *relationship*¹ with, and *response* to, internal events (our thoughts, feelings, memories, physical sensations and urges) are of central importance to our psychological wellbeing. We may become very ‘fused’ with, or attached to, our thoughts, such that we respond to them as if they are true or real. This is referred to as cognitive fusion. A related process, experiential avoidance, occurs when we are unwilling to tolerate internal events that are experienced as aversive, and instead attempt to avoid or escape them, for example by suppressing them. When highly fused with our thoughts and/ or avoidant of our internal experiences, this can result in a narrow repertoire of behavioural responses (e.g. avoidance behaviours). This is referred to as ‘psychological inflexibility’ and is conceptualised as a transdiagnostic process that can compromise our psychological wellbeing.

ACT aims to increase psychological flexibility, the ability to engage with the present moment and take action in line with our values, even when this means experiencing feared internal events. This requires a willingness to be open to our inner experiences. ACT does this by addressing six core processes (Table 1.1) conceptualised as corners of a ‘Hexaflex’ model. These processes can also be framed in terms of three functions/ processes of ‘open up’, ‘be present’ and ‘do what matters’. The focus is on changing

¹ Italics used for emphasis because attending to a person’s relationship with their internal experiences distinguishes ACT from therapies, such as traditional CBT, which aim to alter the content of thoughts.

people's *relationship* with internal events rather than trying to change the content or get rid of distressing thoughts and feelings (Harris, 2009; Hayes, 2016; Ruiz, 2010).

Table 1.1 ACT 'Hexaflex' processes used to increase psychological flexibility, after Harris (2009)

Function	Hexaflex Process	Descriptor
Open up	Acceptance	Being willing to experience painful internal events without trying to change them
	Cognitive defusion	Taking a step back from thoughts/ images/ memories rather than getting caught up in them
Be present	Contact with the present moment	Connecting and engaging with the present moment
	Self-as-context	Connecting with the 'observing self' viewpoint where we can observe our internal experiences and notice we are distinct from them
Do what matters	Values	Connecting with what truly matters to us and using this like a compass to guide what we do
	Committed action	Taking effective action based on our personal context and values

Systematic reviews and meta-analyses of correlational, experimental component and outcome research support the efficacy of ACT in intervening with a range of psychological problems in adults, and support components of psychological flexibility as the mechanism of change (Hacker, Stone & MacBeth, 2016; Levin, Hildebrandt, Lillis & Hayes, 2012; Ruiz, 2010).

1.1.4 An ACT approach to parenting

1.1.4.1 Cognitive fusion and experiential avoidance in parenting

Jones and colleagues (2016) and Coyne and Wilson (2004) provide detailed discussion of the theoretical approaches that underlie an ACT approach to parenting. Briefly, cognitive fusion and experiential avoidance in the parenting context can lead to

inflexible patterns of responding to a child. Parents are often subjected to an abundance of advice and messages about how to parent. It is unsurprising that parents may develop and become attached to ‘verbal rules’, for example, “*If I allow my child to feel anxiety, I am being cruel*” or “*If I do not discipline my child, they will be defiant*”. When ‘fused’ with these types of rules, parents are motivated to adhere to them and may become less sensitive to the current context, for example, by protecting their child from anxiety it is possible their child is missing out on positive experiences. Further, many of these rules carry substantial psychological meaning and are likely to be associated with strong emotional responses which can compromise a parent’s ability to tolerate their child’s distress or behaviours. Parental behaviours and responses therefore become driven by avoiding negative experiences (‘aversive contextual control’) which tends to result in narrow and inflexible behaviours, rather than by natural positive reinforcers (‘appetitive contextual control’) such as noticing when their approach elicits a smile or affection (Whittingham, 2014).

1.1.4.2 Psychological flexibility in the context of parenting

ACT can be used to target these processes with the aim of increasing psychological flexibility in relation to parenting. This means supporting parents to accept their internal experiences in relation to their child as they arise, and to continue to act in line with their parenting values. Psychological flexibility is theorised to help parents be more in tune with their child’s emotions and to use positive parenting practices, such as those taught in traditional BPT (Burke & Moore, 2014; Jones et al., 2016). ACT approaches can therefore complement and/ or build upon existing evidence-based approaches to parenting.

1.1.4.3 State of the literature

Research into ACT as a parenting intervention is a new and developing field, and much of the literature is theoretical. Correlational evidence offers support for the theoretical approach. Parental psychological inflexibility processes have been associated with less helpful parenting behaviours such as inconsistent discipline, and with child emotional and behavioural problems (Burke & Moore, 2014; McCracken & Gauntlett-Gilbert, 2011; Raftery-Helmer et al., 2016). A number of brief reviews

suggest that ACT for parents could improve psychological flexibility, parental mental health, parenting practices and child behavioural and emotional wellbeing (Da Paz & Wallander, 2017; Jones et al., 2016; Raftery-Helmer et al., 2016; Whittingham & Douglas, 2016). However, these reviews have only identified a handful of studies.

1.1.5 Rationale for a systematic review

In summary, there is strong theoretical support for the role of ACT in enhancing positive parenting and a small number of empirical outcome studies have been conducted in recent years. A systematic review of ACT parent intervention studies is now needed in order to synthesise existing outcome literature and facilitate evidence-based practice. This is particularly important as parenting self-help books based on ACT and related mindfulness approaches are in the public domain (Coyne & Murrell, 2009; Kabat-Zinn, 2014; McCurry, 2009). No systematic review of research literature into parenting interventions based on ACT has been completed to date.

1.1.6 Aim/ research question

This study aims to provide a systematic review of empirical outcome studies investigating ACT as a parent intervention based upon the question:

“How do ACT interventions impact upon parenting?”

Parenting has been defined as “*the raising of children and all the responsibilities and activities that are involved in it*” (Cambridge Dictionary, 2019²). As is evident in the above discussion, parenting requires parents to manage their responses to their own internal experiences (thoughts, feelings, urges) in relation to their child’s emotions, beliefs and behaviours (Burke & Moore, 2014). In this review, parenting is therefore considered to encompass parents’ internal (psychological) and external (behavioural) responses to their child and child-rearing role. Outcomes relating to psychological

² Quotation from an online dictionary, available at <https://dictionary.cambridge.org/dictionary/english/parenting>

flexibility are also of interest because this is the target and proposed mechanism of change in ACT interventions. As a secondary aim, this review also asked the question:

“Do ACT interventions successfully target ACT processes in parents?”

1.2 Methods

1.2.1 Search strategy

1.2.1.1 Database searches

A systematic search of studies that have implemented ACT interventions with parents was carried out in December 2019. The following databases covering literature in psychology, healthcare and social sciences were targeted: PsycINFO, MEDLINE, CINAHL, Scopus and the Cochrane library. The Association for Contextual Behavioural Science website (ACBS; “Association for Contextual Behavioral Science”, n.d.) holds a list of publications relevant to ACT and was also searched.

1.2.1.2 Search terms

The search terms and Boolean operators used to identify relevant literature are presented in Table 1.2. The main search concepts were “Acceptance and Commitment Therapy” and “Parent*”. The search strategy was adapted to individual databases to take advantage of their specific features and indexing, for example, the Cochrane library uses MeSH headings. The precise search strategies and results are presented in Appendix B. The titles of publications listed on the ACBS website were searched manually. The reference lists of all articles identified for this review were manually examined, and citations of relevant articles were considered for inclusion.

Table 1.2 Search terms

Main concept	Synonyms	Location
Acceptance and commitment therapy	Acceptance and commitment therapy OR Acceptance-Based	Title, abstract, key words
Parent	Parent* OR family OR mother OR father OR carer* OR guardian	Title, abstract, key words

1.2.1.3 Manual search

1.2.2 Inclusion and exclusion Criteria

During an initial screening of titles and abstracts, articles were retained if they: (1) were published in the English language; (2) were peer reviewed; (3) empirically investigated ACT as a parent intervention; (4) were available in full text. Remaining articles were assessed for inclusion based on pre-determined criteria presented in Table 1.3.

Studies were included for review if they empirically investigated an intervention using ACT with parents. To meet this criterion, the authors had to explicitly state their intervention was based on ACT and there had to be evidence that a minimum of two ACT Hexaflex processes were employed in keeping with a systematic review of ACT interventions for children (Swain, Hancock, Dixon & Bowman, 2015). Quantitative studies were excluded if the focal intervention was delivered to parents and their child together or was delivered in conjunction with another parent intervention without a suitable comparator group. This was to enable inferences to be made about the impact of the parent ACT component. Participants had to be parents of children aged between 0-18 years old, based on a UK service context whereby adolescents typically transition out of child health and education services age 18 years (Care Quality Commission, 2014, 2018; Department for Education, 2018). Studies had to report outcomes related to parenting (as defined above) and/ or ACT processes such as psychological flexibility. Mindfulness is akin to acceptance cognitive defusion, contact with the present moment and self-as-context processes (Leeming & Hayes, 2016) and was

therefore considered an ACT process. Given that this is a new area of research, a pragmatic stance was taken acknowledging that different methodologies yield different insights (Bearman & Dawson, 2013). Qualitative, quantitative and mixed-methods designs were therefore included. Case studies were excluded because they do not examine patterns across data. Grey literature was excluded due to a lack of peer review process to vet its quality.

Table 1.3 Inclusion and exclusion criteria

Criteria	Inclusion	Exclusion
Intervention	Studies explicitly using an ACT intervention with parents	ACT delivered to parents and children, or in conjunction with another parent intervention with no appropriate comparator
Participants	Parents of children aged between 0-18 years	
Outcomes	Parenting/ ACT process outcomes reported	
Design	Qualitative, quantitative and/or mixed methods	Case studies; reviews; theoretical papers
Peer review	Peer reviewed	Grey literature
Date	Any publication date	-
Language	Published in English language	

The primary researcher independently selected papers using the inclusion/ exclusion criteria. In order to reduce bias, they consulted with two experienced research supervisors who were less familiar with ACT literature when uncertain if a paper met the inclusion criteria.

1.2.3 Classification of studies

During a preliminary screening of electronic databases, 616 papers were identified, and 249 duplicates were removed, leaving 367 papers to be screened. A manual review of the title and abstracts led to 338 papers being excluded due to them not meeting the

inclusion criteria³. The full text articles were obtained and reviewed for the remaining 29 articles. Of these, 17 articles were excluded based on the inclusion/ exclusion criteria⁴.

References and forward citations of the remaining 12 papers were checked, which led to five more papers being identified. In total, 17 articles satisfied the review's inclusion criteria and underwent quality assessment, which resulted in a further three papers being excluded (this is discussed in section 1.2.4). A 'Preferred Reporting Items for Systematic Reviews and Meta-analyses' (PRISMA; Moher, Liberati, Tetzlaff, Altman et al., 2009) flow diagram was used to record the study selection process (Figure 1.1).

³ This included eight that were not written in the English language and 10 relevant dissertations/ theses that did not satisfy the criteria for peer review.

⁴ Three did not investigate an intervention explicitly grounded in ACT; four articles delivered interventions to parents with focal children outside of the review age range (two with children up to 20 years of age; one with pregnant women; one with family carers of people with mental health problems); two articles described interventions delivered to children/ adolescents rather than parents; five tested interventions with child/ adolescent and parental components without a parent only or child only comparator; and three articles combined ACT with an established parent training programme (Stepping Stones Triple P; SSTP) without an ACT only/ SSTP only comparator.

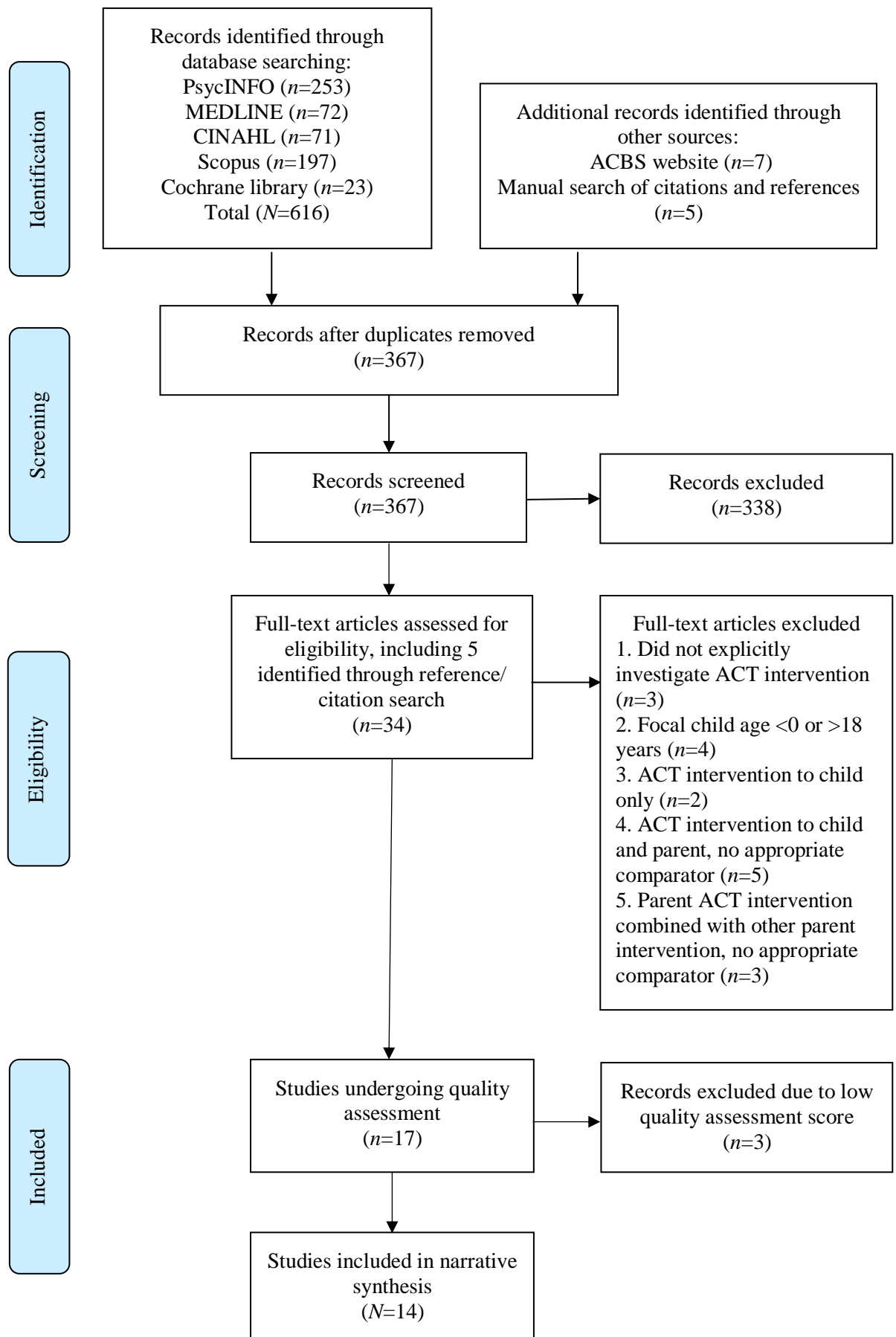


Figure 1.1: Preferred Reporting Items for Systematic Reviews and Meta-analyses' (PRISMA) flow diagram

1.2.4 Quality Assessment Checks

1.2.4.1 Crowe Critical Appraisal Tool

In order to assess the quality of the papers included, the Crowe Critical Appraisal Tool version 1.4 (CCAT; Crowe, 2013; Appendix C) was used. The CCAT was designed to assess health research across all research designs to allow direct comparison of studies using different methodologies (Crowe & Sheppard, 2011a). It is made up of eight categories of preamble, introduction, design, sampling, data collection, ethical matters, results, and discussion. The categories comprise 22 item descriptors in total which are marked as present, absent or non-applicable based on the research design and serve as a guide to scoring categories. Each category is then rated on a 6-point Likert scale from zero (no evidence) to five (highest evidence) based on the objective ratings and the appraiser's overall assessment of the category, supported by a CCAT user guide. Each paper under review is given an overall summary score (ranging from 0-40) which can be converted into a percentage.

The CCAT was developed based on a review of existing critical assessment tools, general research methods theory and standards for reporting research to ensure it is comprehensive with good construct validity (Crowe & Sheppard, 2011a). It has shown good consistency reliability across appraisers (Crowe, Sheppard & Campbell, 2012). The use of category scores to augment an overall summary score enables formal appraisal of different components of the research (Crowe & Sheppard, 2011b).

Universal cut-off scores for considering a paper to be of high/ low quality based on the CCAT are not suggested by the developer. It is recommended that individual researchers judge what is adequate quality based on their purposes. For the current review, a conservative cut-off for including articles in the main analysis was inappropriate because it would risk omitting important information in this new area of study. Articles scoring below 55% on the CCAT were considered to be of sufficiently low quality to cause concern, based on Kmet, Lee and Cook (2004), who consider 55% a liberal threshold on their quality assessment tool.

1.2.4.2 Exclusion based on low quality

Three papers (Poddar, Sinha & Mukherjee, 2015a, 2015b, 2017) were scored below the threshold of 55% by the primary researcher (range from 23 to 35%). A second reviewer who was independent of this research and had a similar level of research training also appraised these articles using the CCAT. The CCAT scores revealed that the primary researcher was more critical in their appraisal of these papers than the second rater. This may have been due to greater familiarity with the topic area and due to a more detailed studying of the papers. Despite the differences, the second appraiser confirmed the low-quality scores⁵. These papers were not included in the subsequent analysis.

1.2.4.3 Quality assessment reliability

In order to ensure the reliability of the quality assessment for the remaining articles, an independent researcher rated eight⁶ of the 14 articles based on the same framework. The inter-rater reliability for each paper was first assessed using the weighted Kappa statistic (WK) which is appropriate for ordinal data (Mandrekar, 2011). The total weighted kappa for all 8 papers based on the category scores was .634, ($p<.001$) and ranged from -.043 ($p=.86$) to .714 ($p=.001$) across individual papers, suggesting that the quality assessment ratings were variable in their reliability. However, on closer inspection the two appraisers' total scores did not differ by more than two points (5% when converted to a percentage) for any paper and did not differ by more than 1 point on any category scores (see Appendix D). It is likely that lower weighted Kappa statistics reflect the discriminate nature of the CCAT which uses a 6-point Likert-type scale. Intraclass correlation coefficients (ICCs) were also run, as they are suitable for assessment of agreement between raters on continuous data (Mandrekar, 2011), and were used by Crowe et al (2012) when assessing the reliability of the CCAT across assessors. The ICC for all 8 papers based on category scores was .907 ($p<.001$), and

⁵ One article (Poddar et al., 2015a) was two pages and information that could be extracted was therefore limited. Another (Poddar et al., 2017) had made an error in their reporting of results (incorrect table presented) limiting the interpretation of the results. All three papers lacked detail about the ACT intervention used, such that it was unclear whether ACT was delivered in a 1-1 or group format.

⁶ It is recognised that for publication purposes inter-rater reliability tests will be carried out for all studies included in the review. However, it was advised that, in order to demonstrate the underlying principals, assessing the inter-rater reliability of at least 50% of papers would be sufficient for the doctoral thesis.

ICCs for individual studies ranged from .323 to .952. The overall ICC for total scores (%) was .973 ($p < .001$). Given the high overall ICC and observed homogeneity of category ratings between assessors, the quality assessment was considered to be reliable for the purpose of this review.

1.2.5 Data extraction and analysis methods

Due to the heterogeneous nature of studies, a qualitative narrative synthesis was used aiming to integrate and summarise the main outcomes of studies to represent the collective work (Bearman & Dawson, 2013). The main characteristics and data relevant to the aims of this review were extracted from each study. This was guided by the PICOS format which attends to participants (P), interventions (I), comparisons (C), outcomes (O) and study design (S; Perestelo-Pérez, 2013). Findings relevant to parenting and ACT processes are described.

1.3 Results

1.3.1 Overview of results

A summary of the main characteristics of each study is presented in Table 1.4. Two of the studies (Whittingham et al., 2014, 2016) report different outcomes of the same trial. Quality assessment scores represented as a percentage ranged from 58% to 85%. Lower scores often related to insufficient detail being reported, for example, the lowest scoring paper (Cassleman & Permberton, 2015) did not include a procedure section and contained limited detail about the ACT intervention used.

Table 1.4: Summary of the key characteristics of the studies reviewed.

Authors; date; location; quality score	Study aim	Research design; ACT intervention and comparator(s)	Sampling method and sample characteristics	Methodology (relevant measures and analysis)	Relevant findings
Blackledge & Hayes (2006) USA CCAT=78%	Preliminary data on the effectiveness of a 2-day parent ACT intervention for parents of children with autism on parent depression and distress, and mechanisms of action.	Within-subject repeated measures; 4 assessment points: 3- and 1-week pre-intervention to assess baseline rate of change; 1-week post-intervention; 3-month FU Intervention: 2-day (14 hour) group-based ACT workshop	Purposeful sampling recruited via treatment centres/ advocacy agencies Normal parents of children with autism, recruited $N=20$ (15 female); completed entire intervention $n=14$ Focal children age NR*	Parenting: PLOC (not included in main analysis due to high baseline scores) ACT Processes: AAQ** (9-item version); ATQ-B (modified to include believability of automatic thoughts) Analysis: Wilcoxon signed-ranked tests; planned contrasts	1. ns change in experiential avoidance (AAQ) pre- to post-intervention ($p>.05$) 2. Improvements AAQ pre-intervention to FU ($p=.04$) 3. Improvements in cognitive defusion (ATQ-B) pre- to post-intervention ($p=.02$) and pre-intervention to FU ($p=.035$)
Burke, Muscara, McCarthy, Dimovski, Hearps, Anderson & Walser (2014) Australia	Pilot Take a Breath (TAB) ACT-based intervention for parents of children with life threatening illnesses	Repeated measures; 6-month FU Intervention: “Take a Breath” (TAB): Group-based ACT intervention incorporating brief problem-solving	Purposeful sampling via promotional flyers and clinician recommendations Parents of children who had a cancer diagnosis or life-saving cardiac	Parenting: PPFQ*** (subscales cognitive defusion, committed action, acceptance) ACT processes: MAAS	1. Improvement in PPFQ at post intervention (subscale d' 's range from .52 to .76) and between post-intervention and FU (subscale d' 's range from .28 to .74); largest effects for cognitive defusion 2. Improvements in mindfulness (MAAS) over time, large effect

Authors; date; location; quality score	Study aim	Research design; ACT intervention and comparator(s)	Sampling method and sample characteristics	Methodology (relevant measures and analysis)	Relevant findings
CCAT=68%		skills; 5x 90-minute sessions over 2 months	surgery $N=19$ (couples $n=5$; completed intervention $n=11$) Focal children age NR*	Analysis: Repeated measures ANOVA; Cohen's effect sizes	sizes post-intervention to FU ($p=NR$, $d=.78$)
Casselman & Pemberton (2015)	Effectiveness and feasibility of ACT and parent psychoeducation therapy group for veterans with PTSD	Mixed methods: Repeated measures; qualitative evaluation	Purposeful sampling from PTSD clinic at a veteran administration medical centre	Parenting: PARQ/ control-CSF (warmth/ affection and hostility/ aggression scales combined); KPS	1. All three fathers increased in positive parenting behaviour (PARQ/control-CSF) pre-post intervention ($p<.05$)
USA		Intervention: 8x weekly 1-hour group-based ACT sessions with parenting psychoeducation component	Male veterans with PTSD diagnoses ($N=7$, completed all measures for analysis $n=3$)	ACT processes: AAQ-II**	2. Two fathers reported increases in parenting satisfaction (KPS; $p<.05$)
CCAT=58% WK=.714 ICC=.947				Analysis: Edwards-Nunnally corrected Reliable Change Index (RCI)	3. Two fathers reported improvements in psychological flexibility (AAQ-II; $p<.05$)
Chong, Mak, Leung, Lam & Loke (2019)	Efficacy of ACT parent training combined with asthma education on parent and child health outcomes	RCT 6-month FU Intervention: 4x weekly group-based sessions with 2-hours of ACT and 30-	Purposeful sampling from paediatric respiratory clinics Parents of children with asthma, $N=168$ (147 mothers; 19%	Parenting: PAMSES (self-efficacy in attack prevention and in attack management subscales) ACT processes: AAQ**	1. ns time-by-group interactions in parental self-efficacy in preventing asthma exacerbations ($p=.168$) 2. Greater improvements in psychological flexibility (AAQ) in ACT group compared to

Authors; date; location; quality score	Study aim	Research design; ACT intervention and comparator(s)	Sampling method and sample characteristics	Methodology (relevant measures and analysis)	Relevant findings
CCAT=83% WK=-.043 ICC=.323	compared to asthma education only.	minutes asthma education Comparator: 2-hour asthma education + 3x weekly phone call	DNA, 3.6% attrition. Focal children aged 3-12 years old ($M=6.8$, $SD=2.5$; 103 males)	Analysis: Generalised estimating equations (GEE); Cohen's d	asthma education only post-intervention ($p=.014$) and at 6-month FU ($p<.001$).
Corti, Pergolizzi, Vanzin, Cargasacchi, Villa, Pozzi & Molteni (2018) Italy CCAT=70%	Effectiveness of ACT-oriented PT (ACT-PT) for children with a recent diagnosis of autism on parental stress, cognitive fusion and experiential avoidance.	Repeated measures with control group Intervention: Child EIBI (20 hours a week over 6 months) plus 12x fortnightly 1.5-hour sessions of group-based ACT-PT Comparator EIBI only	Purposeful sampling from researcher's institute. Parents of children with recent autism diagnosis $N=42$ (excluding 1 DNA). 0% attrition. Focal children aged 2-4 years ($M=2.92$ years, $SD=.70$).	Parenting: PSI-SF (P-CDI scale); Subjective evaluations of changes in parenting domains (Parental competence; Management of child's problems; Communication with child; Satisfaction as a parent; Competence in observing child's problems; scale 0=no change to 10=maximum change; ACT group only) ACT processes: MAAS; CFQ Analysis: Repeated measures ANOVA;	1. Reduced parent-child dysfunctional interactions pre-to post-intervention in ACT group ($p=.01$, effect size .47) and control group ($p=.05$, effect size .22; between group comparison NR). 2. ACT group self-reported changes in parenting on all 7 questions/ domains assessed (ratings ranged from $M=6.90$ to $M=7.75$ out of 10) 3. Unexpected reduction in mindful awareness pre- to post-intervention in ACT-PT group (within subjects $p=.04$; compared with control group $p=.01$).

Authors; date; location; quality score	Study aim	Research design; ACT intervention and comparator(s)	Sampling method and sample characteristics	Methodology (relevant measures and analysis)	Relevant findings
				MANCOVA; Paired and independent samples t-tests	4. ns changes in cognitive fusion in ACT-PT group (CFQ; within subjects $p=.44$; compared with control group $p=.17$).
Gould, Tarbox & Coyne (2018) USA CCAT=65% WK=.704 ICC=.952	Impact of a brief ACT parenting intervention on values driven overt parent behaviour	Non-concurrent multiple baseline across participants; 4 phases (baseline, training, approx. 1-month post-training, 7/ 8-month FU) Intervention: Six 90-minute sessions of 1:1 ACT-PT	Referred by clinical staff Mothers of a child with autism receiving community-based ABA $N=3$ (33% attrition FU) Focal children aged 12, 5 and 4 years old	Parenting: Daily frequency of values-directed parent behaviours (VDPB**); target behaviours were identified by each parent and the ACT trainer prior to baseline) – parent and independent observer report ACT processes: AAQ-II** Analysis: Descriptive statistics; frequency of VDPBs per week	1. Increased occurrence of VDPB for 2 parents during training phase (occurrences per week from zero to P2 $M=6.54$; P3 $M=1.49$) and for all parents over 1-month period post-training (P1 $M=10.75$, P2 $M=2.39$, P3 $M=2.5$). 2. Further increases at 7/8-month FU (P2 DNA; P3 $M=11$ over 2-weeks, P1 11 VDPB over 1-week). 3. Reductions in psychological inflexibility (AAQ) in 2 participants pre- to post-intervention (by 43% and 29%) and pre-intervention to FU (by 54% and 32%)
Hahs, Dixon & Paliliunas (2018)	Utility of ACT in treating parents of children with	RCT with matched assignment	Purposeful sampling; children receiving ABA	ACT processes: AAQ-II**; WBSI; ISS; CFQ-13; FMI; MAAS; PVQ-II	1. Greater improvements in ACT group on psychological flexibility (AAQ-II; $p=.032$,

Authors; date; location; quality score	Study aim	Research design; ACT intervention and comparator(s)	Sampling method and sample characteristics	Methodology (relevant measures and analysis)	Relevant findings
USA CCAT=70% WK=.6 ICC=.821	autism on depression and a variety of measures associated with ACT	Intervention: ABA for child (150-300 hours a week) plus 2x 2-hour group-based ACT training sessions roughly 1 week apart Comparator: Child ABA only	Parents of children with autism $N=18$ Focal children aged 5-13 years ($M=8.44$; $SD=2.52$)	Analysis: Independent samples t -tests on pre-post intervention change scores; Cohen's effect size analyses	$d=.94$, cognitive defusion (CFQ-13; $p<.049$, $d=.83$); internalised shame (ISS; $p<.005$, $d=-1.37$) and living by values (PVQ-II, $p=.016$, $d=1.11$); large effect sizes 2. ns group differences on thought suppression (WBSI; $p>.05$, $d=.46$). 3. Greater improvements in mindfulness on the MAAS ($p<.007$, $d=1.29$), not FMI ($p>.05$, $d=.32$).
Joekar, Farid, Birashk, Gharraee & Mohammadian (2016) Iran CCAT=63% WK=.385 ICC=0.588	Effects of an ACT parent treatment on psychological distress of parents of children with high functioning autism	Repeated measures; control group; 1-month FU Intervention: 8x weekly 90-minute group-based ACT sessions Comparator: Weekly counselling sessions (TAU)	Convenience sampling from Autism charity Mothers of children with high functioning autism ($N=24$) Focal children aged 6-12 years for inclusion (actual age NR)	ACT processes: AAQ-II** Analysis: MANCOVA	1. Reduced experiential avoidance in ACT group compared to TAU pre- to post-intervention (AAQ-II; $p=.001$, effect size .482) and pre-intervention to FU ($p=.011$, effect size .326) 2. Reduction in AAQ-II mean scores post-intervention to FU in ACT group, significance NR

Authors; date; location; quality score	Study aim	Research design; ACT intervention and comparator(s)	Sampling method and sample characteristics	Methodology (relevant measures and analysis)	Relevant findings
Moyer, Page, McMakin, Murrell, Lester & Walker (2018)	ACT on positive parenting strategies, psychological flexibility and distress in parents who have experienced relationship violence	Controlled trial, pseudo-random assignment; 6-week FU	Subsample (all parents) of trial; Purposeful sampling recruited from an outreach organisation	Parenting: APQ (positive parenting scale) ACT processes: AAQ-II**; VLQ	1. Greater improvements in positive parenting pre- to post-intervention in ACT+TAU group compared to TAU only ($p=.015$)
USA		Intervention: 4x 1-hour weekly group-based ACT sessions and TAU	Parents who had experienced relationship violence with clinical level post-traumatic stress symptoms ($N=43$; completed measures post-intervention $n=36$, FU $n=29$)	Analysis: Mixed-design repeated measures ANOVA	2. ns between group differences in positive parenting change pre-intervention to FU ($p=.089$)
CCAT=83% WK=.294 ICC=0.533		Comparator: TAU (person-centred cognitive-behavioural therapies; 1:1 or group)	Children's ages NR*		3. ns between group differences in change over treatment in experiential avoidance (AAQ; $p=.420$) or valued living (VLQ; $p=.805$) 4. Change in valued living over treatment negatively associated with change in positive parenting
Rayner, Dimovkia, Muscara, Yamada, Burke, McCarthy, Hearps, Anderson, Coe,	Uptake, acceptability, participant experiences and feasibility of ACT group intervention via video	Mixed methods: Repeated measures with 6-month FU; qualitative evaluation	Purposeful sampling	Parenting: PPFQ*** ACT processes: AAQ-II** Analysis: Multilevel mixed-effects linear regression; Cohen's d for effect sizes.	1. Improvement in parent psychological flexibility from pre- to post intervention and FU (PPFQ; $p=.03$; pre-post $d=.19$, pre-FU $d=-.80$). *AAQ-II findings NR

Authors; date; location; quality score	Study aim	Research design; ACT intervention and comparator(s)	Sampling method and sample characteristics	Methodology (relevant measures and analysis)	Relevant findings
Hayes, Walser & Nicholson (2016) Australia CCAT=63%	conferencing; examine changes in parental psychological functioning	“Take a Breath” (TAB) delivered via videoconference	children, mothers $n=8$; pre-post measures $n=12$, FU measures $n=8$. Focal children age at health diagnosis $M=31.4$ months ($SD=32.6$; 4 male)		
Reid, Gill, Gore & Brady (2016) UK CCAT=70%	Qualitatively evaluate an ACT-based intervention for family carers of children with intellectual/developmental disabilities	Semi-structured interviews Intervention 2x 4-hour ACT-based parent well-being workshops 1 week apart, offered as part of wider systemic support for families.	Convenience sampling from an intensive therapeutic and short break service Mothers of children with an ASD and severe LD, at risk of residential placement due to challenging behaviour ($N=9$; attended workshops $n=7$; participated in interview $n=5$) Focal children aged 9-14 years	Semi-structured interview schedule covered: General information about workshop attendance; experience and emotional well-being pre-workshop; experience of the workshops; recommendation for future workshops. Analysis: Interviews audio recorded and transcribed; Thematic analysis	<p>1. Theme ‘New ways of seeing and being’ describes parents having more mindful outlook and using mindfulness in their lives</p> <p>2. Theme ‘Positive changes’ described post-group changes e.g. values-led changes</p> <p>3. Theme ‘looking to the future’ described the group acting as a tool for participants to continue making changes</p>

Authors; date; location; quality score	Study aim	Research design; ACT intervention and comparator(s)	Sampling method and sample characteristics	Methodology (relevant measures and analysis)	Relevant findings
Wallace, Woodford & Connelly (2016)	Pilot an ACT-based group intervention targeting general psychological flexibility for parents of adolescents with chronic pain.	Pilot study; repeated measures; 2-week, 3-month and 6-month FU	Purposeful sampling from a multidisciplinary pain clinic	Parenting: PPFQ-pain*** ('values-based action', 'emotion acceptance', 'pain acceptance', 'pain willingness' subscales); ARCS ('protective', 'monitoring' and 'minimising' subscales)	1. Increases in parent pain-related psychological flexibility (total PPFQ-pain) across treatment period ($p<.02$; not emotion acceptance scale) and FU period ($p< .001$; all scales)
USA		Intervention: 8x weekly 75-minute group-based ACT sessions	Mothers of adolescents with chronic pain (duration 1 to 17 years; $N=8$; Drop out $n=2$)		2. ns change in parent response to their child's pain (ARCS scales) during intervention period
CCAT=83% WK=.556 ICC=.903			Focal adolescents aged 13-18 years ($M=17$, 3 males)	Analysis: Hierarchical linear modelling	3. Decrease (improvement) in protective parenting scale of ARCS over FU period $p<.01$)
Whittingham, Sanders, McKinlay & Boyd (2014)	Efficacy of Stepping Stones Triple P (SSTP) parent intervention with and without ACT on dysfunctional parenting and behavioural and emotional problems in	RCT; 6-month FU Intervention: SSTP (6x 2-hour group-based sessions and 3x 30-minute telephone consultations) plus 2x 2-hour group-based ACT sessions prior to SSTP	Purposeful sampling from registers/databases of children with cerebral palsy Parents of children with cerebral palsy, post intervention $N=67$ (97% mothers), FU $n=28$	Parenting: Parenting style (PS; 'laxness', 'over reactivity' and 'verbosity' scales) Analysis: ANCOVA (between groups); t-tests (within group: post-intervention to FU)	1. Reduced dysfunctional parenting post-intervention in SSTP+ACT compared to WL on PS over reactivity ($p=.008$) and verbosity ($p=.01$) 2. ns differences between SSTP only and WL, or SSTP only and SSTP+ACT-post intervention 3. Lower PS laxness ($p=.038$) and verbosity ($p=.003$) in
Australia CCAT=85% WK=.667					

Authors; date; location; quality score	Study aim	Research design; ACT intervention and comparator(s)	Sampling method and sample characteristics	Methodology (relevant measures and analysis)	Relevant findings
ICC=0.873	children with cerebral palsy.	Comparators: 1. SSTP only 2. WL controls (post-intervention only)	Focal children aged 2-12 years ($M=5.3$, $SD=3.0$; 43 boys)		SSTP+ACT compared to SSTP only at FU
Whittingham, Sanders, McKinlay & Boyd (2016) Australia CCAT=85%	Efficacy of SSTP parent intervention with and without ACT on parental adjustment, parenting confidence, child functioning and child quality of life.	See Whittingham et al. (2014)	See Whittingham et al. (2014)	Parenting: CP-DPTC – ‘problem’ and ‘confidence’ scales Analysis: ANCOVA (between groups); t-tests (within group; post-intervention to FU)	1. No effect of intervention on parental confidence or the degree to which they found parenting tasks problematic post-intervention or at FU ($ps>.05$)

**Despite children's ages not being reported, it was assumed that parents had children aged 18 years or younger based on the nature of the research and parenting measures used.*

***The AAQ/ AAQ-II is considered a measure of general psychological flexibility. Before the term ‘psychological flexibility’ was developed, the term experiential avoidance was used to describe the ACT model and the AAQ was considered a measure of this (Bond et al., 2011). As such, some papers have reported the AAQ/ AAQ-II as a measure of psychological flexibility, and some as experiential avoidance).*

*****PPFQ, PPFQ-pain and VDPB** could be seen as measures of ACT processes (values; psychological flexibility in the context of parenting) or parenting as they related to parenting behaviour (all three) and responses to their child/ child-rearing role (PPFQ; PPFQ-pain). For the purpose of this review, they are reported as parenting measures as parenting in the primary interest of this review and to avoid duplication.

General abbreviations: ABA = applied behavioural analysis; CCAT = Crowe Critical Appraisal Tool; EIBI = early intensive behavioural intervention; FU = follow up; ICC = Intraclass correlation coefficient; NR = not reported in article; ns = non-significant; P1=parent 1, P2=parent 2 etc; PT = parent training; RCT = randomised controlled trial; TAU = treatment as usual; WK = weighted kappa; WL = waiting list

Measures: AAQ = Acceptance and Action Questionnaire; APQ = Alabama parenting questionnaire; ARCS = Adult responses to children's symptoms; ATQ = automatic thoughts questionnaire; CP-DPTC = Cerebral Palsy Daily Parenting Tasks Checklist (Measure designed for this study); CFQ = Cognitive Fusion Questionnaire; FMI = Frieburg Mindfulness Inventory; KPS = Kansas Parental Satisfaction Scale; ISS = Internalised Shame Scale; MAAS = Mindful Attention and Awareness Scale; PAMSES - Parent Asthma Management Self-Efficacy Scale; PARQ/ control-CSF = Parental Acceptance-Rejection/ control Questionnaire: Child short form; PLOC = Parental Locus of Control Scale; PSI-SF (P-CDI scale) = Parenting Stress Index-Short Form (parent-child dysfunctional interactions scale); PSO-SF = Parenting Stress Index-Short Form; PPFQ = Parental psychological flexibility questionnaire; PPFQ-pain = Parent psychological flexibility questionnaire [in relation to children physical health]; PVQ-II = the Personal Values Questionnaire-II; VPQ = valued living questionnaire; WBSI = The White Bear Suppression Inventory

All measures parent report unless otherwise specified

1.3.2 Characteristics of the study (PICOS)

1.3.2.1 Participants

Studies in this review used purposeful or convenience sampling. Six targeted parents of children with Autism. Of these, children were undergoing behavioural interventions (Applied Behavioural Analysis [ABA] or Early Intensive Behavioural Intervention [EIBI]) in three studies (Corti et al., 2018; Gould et al., 2018; Hahs et al., 2018). Six studies report on parents of children with physical health conditions (cancer/ life-saving cardiac surgery, asthma, chronic pain or cerebral palsy). The remaining two studies targeted parents based on parent rather than child factors (women who had been victims of relationship violence; Moyer et al., 2018, and veterans with diagnoses of post-traumatic stress disorder; Casselman & Pemberton, 2015). As such, participants in all studies were contending with factors additional to what might be considered ‘normal parenting’ and were likely to have experienced significant levels of stress as well as input from a range of services.

Sample sizes across the studies ranged from three to 168 parents. The samples used were generally deemed appropriate in relation to the study aims and the fact that they were investigating a relatively new area of research. Nonetheless, it is important to hold these factors in mind when considering the generalisability of the findings. The exception is Hahs et al. (2018), who were the only RCT not to report sample size calculations, and where the authors note the limitations of their small sample ($N=18$) for this design.

1.3.2.2 Interventions

The purpose and nature of the ACT interventions delivered differed across studies. With the exception of Gould et al. (2018), a group format was used with one delivered via video-conferencing (Rayner et al. 2016). The length of sessions ranged from one hour (Casselman & Perberton, 2015; Moyer et al., 2018) to seven-hour workshops (Blackledge & Hayes, 2006) and the total time receiving ACT ranged from approximately four hours (Hahs et al., 2018; Moyer et al. 2018; Whittingham et al.

2014, 2016) to 18 hours (Corti et al., 2018). Interventions also differed in their focus, with some aimed primarily at improving parents' mental health/ wellbeing and others directly targeting parenting behaviours. Three ACT interventions explicitly incorporated parenting psychoeducation or problem-solving skills (Burke et al., 2014; Cassleman & Permberton, 2015; Rayner et al., 2016) while another three investigated ACT as an adjunct to an existing parenting intervention (asthma psych-education, Chong et al., 2019; Stepping Stones Triple P [SSTP], Whittingham et al., 2014, 2016). Moyer et al. (2018) reported on parenting outcomes from a sub-set of participants (parents) from a larger ACT trial that focused on relationship violence.

Taken as a whole, there is evidence to suggest that the interventions reported on across studies hold validity as ACT interventions. The majority of papers provided detailed descriptions of their programme and/ or referred to requestable intervention manuals. Limited information about intervention content was available in three studies (Casselman and Perberton, 2015; Moyer et al., 2018; Reid et al., 2018). Nonetheless, all papers included evidence that a range of ACT Hexaflex processes had been covered, and that metaphor and experiential exercises had been used (key components of ACT; Harris, 2009; Hayes, 2016; Twohig, 2012). Six of the papers included discussion of adherence and/ or fidelity checks (Blackledge & Hayes, 2006; Chong et al., 2019; Corti et al., 2018; Moyer et al., 2018; Whittingham et al., 2014, 2016) and of those that did not, two referred to the facilitators credentials in using ACT (Cassleman & Perberton, 2015; Rayner et al., 2016).

1.3.2.3 Comparisons

Half of the studies ($n=7$) included control conditions. In five of these, participants in the ACT group received ACT in addition to parent (Chong et al., 2019; Joekear et al., 2016; Moyer et al., 2018) or child (Corti et al., 2018; Hahs et al., 2018) treatment as usual (TAU) and were compared with a TAU only control group. Whittingham et al.

(2014, 2016) included two comparator conditions: SSTP only and waiting list (WL) controls⁷. None of the studies accounted for extra contact time in the ACT condition.

1.3.2.4 Main outcomes

The relevant questionnaire measures used in included papers are listed in Appendix E. Ten quantitative studies (Burke et al., 2014; Cassleman & Perberton, 2015; Chong et al., 2019; Corti et al., 2018; Gould et al., 2018; Moyer et al., 2018; Rayner et al., 2016; Wallace et al., 2016; Whittingham et al., 2014, 2016) measured diverse outcomes in relation to parenting style, parent-child interactions, parenting-specific psychological flexibility, parenting satisfaction and managing their child's physical health condition based on eight validated questionnaires. In addition, the Cerebral Palsy Daily Parenting Tasks Checklist was designed specifically for the RCT reported on by Whittingham et al. (2016), and Corti et al. (2018) developed a measure of post-intervention subjective changes in parenting. In an innovative approach, Gould et al. (2018) used behavioural monitoring to measure the occurrence of pre-identified values-directed parenting behaviours unique to each participant. Parents and an independent observer recorded occurrences of their target behaviours adding to the reliability of observations.

A total of eight validated self-report questionnaires were used to measure overall psychological flexibility, mindfulness, cognitive fusion and values (excluding versions of the same questionnaire and measures of parenting-specific psychological flexibility). The most commonly used measure was the AAQ/ AAQ-II, a measure of psychological flexibility (sometimes referred to as a measure of experiential avoidance). In addition, Reid et al. (2016) collected broad qualitative data about participants' experiences of the ACT intervention via a semi-structured interview which elicited information in relation to ACT processes.

⁷ Parents in the ACT condition received four hours of group-based ACT prior to receiving a SSTP behavioural parenting intervention. The first comparator group received SSTP only. WL controls were offered SSTP following post-intervention data-collection, and follow-up data for this control is therefore unavailable.

1.3.2.5 Study design

Four studies (Chong et al., 2019; Hahs et al., 2018; Whittingham et al., 2014, 2016) were found reporting on three RCTs, and another reported on a controlled trial with pseudo randomisation (Moyer et al., 2018). Two further studies (Corti et al., 2018; Joekear et al., 2016) used between-subjects designs. Reid et al. (2016) qualitatively evaluated an ACT intervention. The remaining studies used within-subjects designs⁸. Ten studies (Blackledge & Hayes, 2006; Burke et al., 2014; Chong et al., 2019; Gould et al., 2018; Joekear et al., 2016; Moyer et al., 2018; Rayner et al., 2016; Wallace et al., 2016; Whittingham et al., 2014, 2016) included a follow-up period ranging from one month to seven-eight months. Study designs were considered appropriate to their aims.

1.3.3 How do ACT interventions impact parenting?

1.3.3.1 Parenting style/ parent-child interactions

Four of the studies (Cassleman & Perberton, 2015; Corti et al., 2018; Moyer et al., 2018; Whittingham et al., 2014) investigated parenting style and/ or the nature of parent-child interactions. Cassleman and Perberton (2015) found that all three veteran fathers in their study self-reported significant increases in positive parenting, characterised by warmth and affection and reduced hostility and aggression following eight sessions of ACT. In a larger study of parents with young children with autism, Corti et al (2018) found reduced dysfunctional parent-child interactions in parents who received a 12-session ACT intervention compared to parents in an EIBI only comparator group. Participants who underwent ACT reported changes in their communication with their child, management of their child's problems and parental competence. These questions were not asked to parents in the EIBI only group, and it is therefore possible that EIBI or ACT may have accounted for these changes. Whittingham et al. (2014) found reduced parental 'laxness' and 'verbosity' 6-months following an ACT+SSTP intervention compared to those who received SSTP in isolation, suggesting that the four-hour ACT component provided additional benefits

⁸ Cassleton and Perberton (2015) and Rayner et al. (2018) also collected qualitative data, however this was not relevant to the current study.

to SSTP. Moyer et al. (2018) investigated positive parenting, characterised by warmth, supportive behaviours, positive reinforcement, and active involvement in a child's life. Parents who received four sessions of ACT in addition to TAU showed greater improvements in positive parenting at post-intervention in comparison to parents in the TAU group, however, these differences were not significant after a six-week follow-up. The authors suggest that their study may have been underpowered to detect significant between-group differences (original sample $N=43$, parents at follow-up $N=29$). Further, the ACT intervention was relatively short in duration (four one-hour group sessions) and did not specifically target parents.

1.3.3.2 Parenting psychological flexibility

Burke et al. (2014) and Rayner et al. (2016) both investigated parenting psychological flexibility, characterised by acceptance, cognitive defusion and committed action in the parenting context, following the five session "Take a Breath" (TAB) ACT-based intervention. Both studies found that parents of children with life-risking physical health conditions showed improvements in parenting psychological flexibility at post-intervention with further improvements seen over a six-month follow up period. Wallace et al. (2016) reported on parenting psychological flexibility directly related to parents' approaches to their child's physical pain. Parents showed increases in pain-related psychological flexibility over the eight-week ACT intervention period and over a six-month follow-up period. While the emotional acceptance did not significantly change over the intervention period, it did over the follow-up period. As such, the benefits of ACT on parenting psychological flexibility may increase over time, even after the intervention is complete. This is supported by findings from Gould et al. (2018). While mothers in this study reported increased occurrences of values-directed parenting behaviours over the one-month period following completion of nine hours of ACT, occurrences were even greater over a one- to two-week period seven- to eight-months later in the two participants who attended follow-up. While this study is limited due the small sample size, it directly assesses a core aspect of ACT, acting in line with one's personal values.

These findings are in part supported by qualitative data from parents of children with autism, severe learning disabilities and behavioural problems (Reid et al., 2016). The authors' narrative highlights how parents were more accepting of their difficulties with their children following eight hours of ACT and were able to use mindfulness to stay present, including in the parenting context. It was unclear how many of their participants contributed to this picture.

1.3.3.3 Parenting satisfaction

Two studies assessed parenting satisfaction. They found that veteran fathers (Cassleman & Perberton, 2015) and parents of children with autism (Corti et al., 2018) reported increased satisfaction in their parenting role after receiving ACT, however, there were no comparators for these measures.

1.3.3.4 Responses to child physical health

Findings in relation to parents' responses to their child's condition were mixed. Wallace et al. (2016) found that parents showed fewer protective responses in relation to their adolescent child's pain six-months after an eight-week ACT intervention, but not directly post-intervention. A reduction in protective responses was seen as positive because special attention/ protective responses have been associated with poorer mental health and social functioning in children with pain conditions. No changes in minimising or monitoring responses were seen following the ACT intervention, however, the authors note parents reported few minimising responses at baseline. In the largest RCT in this review, Chong et al. (2019) compared parents who did and did not receive four two-hour ACT workshops in addition to asthma psycho-education. They did not find significant between group differences in parents' asthma management self-efficacy. Similarly, in another RCT parents who did and did not receive four hours of ACT in addition to SSTP were compared (Whittingham et al., 2016). No between group differences were found in parents' confidence in parenting tasks associated with having a child with cerebral palsy, or the degree to which they found these tasks problematic post-intervention or after a six-month follow-up. Taken

together, these findings suggest that ACT did not change parents' confidence in managing their child's physical health condition.

Taken as a whole, the papers reviewed suggest that ACT had a positive impact on the parenting outcomes assessed.

1.3.4 Do ACT interventions successfully target ACT processes in parents?

Eight of 10 quantitative studies found positive changes in ACT processes (Blackledge & Hayes, 2006; Burke et al., 2014; Cassleman & Perberton, 2015; Chong et al., 2019; Corti et al., 2018; Gould et al., 2018; Hahs et al., 2018; Joekear et al., 2016).

1.3.4.1 Psychological flexibility

The impact of ACT on general psychological flexibility was reported on in eight studies using the AAQ/ AAQ-II. Blackledge and Hayes (2006) did not find significant changes in parents' psychological flexibility post-intervention. On the other hand, Chong et al. (2019), Hahs et al. (2018) and Joekear et al. (2016) found significantly greater improvements in psychological flexibility post-intervention in those who received ACT compared to comparator groups ($p < .05$). Cassleman and Perberton (2015) and Gould et al. (2018) each found significant improvements in two out of three of their respective participants directly following ACT interventions, although it is noted that Gould et al. (2018) based this on descriptive statistics only. Four studies that assessed psychological flexibility after follow-up periods (ranging from one month to eight months) all found improvements pre-intervention to follow up (Blackledge & Hayes, 2006; Chong et al., 2019; Gould et al., 2018; Joekear et al., 2016). It is possible that the intervention period in Blackledge and Hayes' study was too brief for participants to experience these changes immediately (14-hour workshop delivered over two days), however benefits developed over time. These studies are supported by qualitative findings reported by Reid et al. (2016). The authors provide evidence that parents were incorporating acceptance and mindfulness approaches into their lives in order to make positive changes that impacted themselves and those around them. Reid et al. (2016) report that "*Unanimous amongst the parents was the*

realization that their situations at home had not changed, yet their response to approaching their difficulties had” (p. 12).

Contrary to these findings, Moyer et al. (2018) did not find significant differences in AAQ-II scores at post-intervention or follow-up between participants who received treatment as usual (TAU) and ACT, and TAU only.

1.3.4.2 Mindfulness

Mixed results were found in relation to mindfulness across three studies. Hahs et al. (2018) did not find statistically significant differences between parents who received ACT compared to child-ABA only comparators on the Frieberg Mindfulness Inventory but found improvements in the ACT group on a measure of mindful attention and awareness (MAAS). Corti et al. (2018) found paradoxical reductions on the MAAS in participants in their ACT group compared to controls. Burke et al. (2014) was the only study to examine the impact of ACT on mindfulness (using the MAAS) at follow-up and found significant increases in mindfulness over the six-months following intervention completion. As with psychological flexibility, it is possible that benefits of ACT on parents’ mindfulness develop post-intervention. This is supported by qualitative data. Reid et al. (2016) reported *“There was a sense that the parents were beginning a new journey in discovering how to implement mindfulness and acceptance”* (p. 13) following ACT. They additionally identified a sub-theme of *“making mindfulness my own”*, which described how participants were incorporating mindfulness into their lives. Within this, there was recognition of barriers to using mindfulness.

1.3.4.3 Cognitive fusion

Three studies included measures relating to cognitive fusion. Blackledge and Hayes (2006) found reductions in cognitive fusion pre- to post-intervention and pre-intervention to follow-up using a modified version of the automatic thoughts questionnaire that incorporated the perceived believability of thoughts. Corti et al. (2018), who investigated the longest ACT intervention reviewed here, found no

change on the cognitive fusion questionnaire (CFQ) post-intervention in within or between group analyses. On the other hand, Hahs et al. (2018), representing one of the briefer interventions, found participants improved on the CFQ pre-post intervention with large effects. Further, they found reductions in participants internalised shame but no change in thought suppression compared to ABA only comparators.

1.3.4.4 Values

Two quantitative studies reported on measures relating to valued living. Hahs et al. (2018) found improvement in parents' self-reports of how consistently they lived by their values pre-post intervention compared to parents in a child ABA only condition, whereas Moyer et al. (2018) did not find any differences in parents receiving ACT compared with TAU in values-directed living at post intervention or at a 6 week follow-up. Reid et al. (2016) report on a qualitative theme of *Positive changes* whereby some participants (number not reported) reported acting in line with their values of self-care.

Taken as a whole, the papers suggest parents' overall psychological flexibility increased following ACT interventions. The findings were less consistent for specific ACT processes.

1.4 Discussion

1.4.1 Psychological flexibility and parenting

Research into ACT as a parent intervention is in its infancy, however, promising findings have been found in heterogeneous studies including a small number of RCTs. Based on the limited evidence available, and predominantly based on research with parents of children with physical health or neurodevelopmental conditions, the findings suggest that ACT may offer a useful approach to parent intervention. They provide evidence that following ACT interventions, parents increased in positive parenting behaviour such as a warm interaction with their child, and showed reductions in unhelpful parenting styles. With the exception of the parenting

psychological flexibility questionnaire (PPFQ), no two studies measured the same parenting outcome making it difficult to draw more precise conclusions about how parenting is impacted. Perhaps the strongest evidence in relation to parenting is for the potential of ACT interventions to increase parents' parenting-specific psychological flexibility, as predicted by ACT theory. As expected, most studies also found improvements in parents' general psychological flexibility after completing an ACT intervention.

Based on the current research, it is not possible to determine whether the benefits on parenting were mediated by changes in general or parenting-specific psychological flexibility. However, this would be predicted by ACT theory and is in keeping with investigations by Brown, Whittingham and Sofronoff (2015) into the mechanisms of change in a combined ACT and SSTP parent programme. The authors found that the positive impacts of the intervention on parental stress and unhelpful parenting styles were mediated by parenting-specific psychological flexibility. In the current review, Wallace et al. (2016) offer preliminary support for parenting-specific psychological flexibility as a mechanism of change. They found that changes in pain-related parenting psychological flexibility (evident post-intervention) preceded changes in protective parenting responses (observed at follow-up only).

1.4.2 The benefits of ACT over time

An important finding from the collective work reviewed is that changes in psychological flexibility, both as a generic measure and explicitly in the parenting context, appear to have been maintained over follow-up periods and in some cases, further improvements were observed after completion of an ACT intervention. This suggests that the benefits of ACT for parents may not be fully realised for several months. If psychological flexibility is indeed the process by which ACT exerts its influence, then changes in other outcomes, such as parenting and child wellbeing, may become more apparent over time. This is in keeping with Ruiz's (2010) review of ACT outcome studies that found ACT to be efficacious in diverse contexts with larger effect sizes often seen after follow-up periods.

It is possible that the mixed findings in relation to specific ACT processes were observed because measuring these processes post-intervention does not allow time for changes to be realised. For example, participants in Reid and colleagues' (2016) study described how they previously used avoidant coping strategies to manage having a child with significant neurodevelopmental and behavioural difficulties, and following ACT were incorporating mindfulness and acceptance strategies. It is likely that developing these skills and new ways of approaching their struggles would take time. Further, the emphasis in ACT on allowing and accepting internal experiences may also mean that initially, parents are more aware of the times that they are struggling to relate to their thoughts and feelings in a mindful way. This suggestion is supported by the findings of Singh et al. (2006), who delivered a 12-week mindfulness course to parents. They found parents' initially reported decreases in mindfulness, and that this then increased as the programme went on. Parents reflected that at the start of the programme, they had not fully understood what it meant to be mindful in their parenting contexts. The authors suggest that this may explain their initial reduction in self-reported mindfulness.

1.4.3 Value of ACT as a parenting intervention

1.4.3.1 Child wellbeing

The findings that ACT can be efficacious in improving parental psychological flexibility and parenting practices are important, because these factors are likely to impact on child wellbeing. For example, Brassell and colleagues (2016) found that higher parenting-specific psychological flexibility was associated with 'adaptive parenting', characterised by warmth, affection, clear instruction, and less 'harsh', 'lax' and inconsistent styles of discipline. This, in turn, was associated with less emotional and behavioural problems in children and adolescents. Williams, Ciarrochi and Heaven (2012) undertook longitudinal research with adolescents through the secondary school years. They found that authoritarian parenting, (characterised by low warmth and high control) predicted psychological inflexibility in adolescents longitudinally, whereas greater warmth and empathy, particularly as a child matures through adolescence, was associated with greater psychological flexibility in the later

secondary school years. Psychological flexibility, in turn, has been associated with less depression and anxiety in young people (Epkins, 2016; Mellick, Vanwoerden & Sharp, 2017; Paulus, Vanwoerden, Norton & Sharp, 2016; Valdivia-Salas, Martín-Albo, Zaldivar, Lombas & Jiménez, 2017).

Four of the studies included in the current review examined the impact of ACT parenting interventions on focal children. They found positive impacts on child asthma symptoms and need for healthcare services (Chong et al., 2019), adolescent-reported pain interference (Wallace et al., 2016), and child behaviour, functional mobility and quality of life (Whittingham et al., 2014, 2016). These changes were more apparent after a 6-month follow-up in the latter three studies, adding support to the hypothesis that ACT parent interventions may have beneficial effects on young people's wellbeing over time.

1.4.3.2 Parent wellbeing

Eleven of the 14 papers included in this review assessed aspects of parents' mental health. This points to the fact that the ACT parenting literature to date has been focused on parent wellbeing. While it is beyond the scope of this report to review these findings in depth, it is of note that they collectively found that ACT benefitted parents' mental health beyond increasing psychological flexibility, for example, by reducing parental stress, anxiety and depression (Blackledge & Hayes, 2006; Chong et al., 2019; Hahs et al., 2018; Joekear et al., 2016; Moyer et al., 2018; Whittingham et al., 2016), and improving their quality of life (Chong et al., 2019) and self-compassion (Gould et al., 2018). This suggests that ACT parent interventions are likely to have additional value in addressing parents' mental health and wellbeing, particularly in the context of parenting a child with physical health or neurodevelopmental diagnoses. As well as it being important to support parents in and of itself, these findings are also significant because children whose parents have a mental health condition are at greater risk of mental health difficulties (NHS Digital, 2018).

1.4.4 Implications

Recent statistics regarding young people's mental health show that mental health conditions can develop in children as young as 2 to 4 years of age (NHS Digital, 2018), highlighting a need to intervene early. Given that parental mental health difficulties and parenting approaches have been shown to impact young people's wellbeing, parenting interventions are an appropriate target for intervention. Based on the findings of this review, and in the context of broader relevant literature, it is suggested that ACT as a parent intervention has the potential to simultaneously improve parental psychological flexibility, mental health and wellbeing, and parenting behaviours. This is likely to promote psychological flexibility and wellbeing in their children. Given these promising preliminary findings, there are grounds for further research to investigate ACT as a parent intervention (see recommendations in section 1.5.3). The findings of this review suggest that when evaluating the effectiveness of ACT interventions, it is important to be mindful that change may take time to be realised. As such, outcomes should be monitored over a follow-up period.

Clinicians working in child and family services might consider using ACT either as a standalone parent intervention or in conjunction with other evidence-based interventions. Similarly, practitioners working in adult mental health settings with parents who are experiencing stress and distress in their parenting role might consider the benefits of ACT to facilitate their wellbeing while simultaneously supporting them in this role.

1.5 Conclusions and future directions

1.5.1 Strengths of this review

This is the first review to systematically synthesise ACT parenting intervention literature. Using a broad conceptualisation of parenting enabled a diverse range of findings to be captured. Further, including research from a range of methodological designs enabled their collective wisdom to be integrated to give a fuller picture of our knowledge of this subject area to date (Bearman & Dawson, 2013). In doing so, this study has provided a new understanding of how ACT for parents can impact general

psychological flexibility and parenting-specific psychological flexibility, behaviours and attitudes. The quality assessment process adds to the robustness of this review.

1.5.2 Limitations of this review

Limitations of this review need to be acknowledged. There was only one researcher undertaking the data selection and extraction processes. Having two reviewers independently select papers based on the inclusion/ exclusion criteria and extract data would have reduced bias and added to the robustness of this review (Perestelo-Pérez, 2013). While every effort was made to represent the collective research in a balanced manner, the use of qualitative synthesis requires subjective methods which may introduce bias, for example, some results may be emphasised over others (Bearman & Dawson, 2013; Perestelo-Pérez, 2013). Qualitative synthesis methods were necessary in the context of the current review due to heterogeneity in the studies. Every effort was made to reduce bias by using a systematic process, liaising with research supervisors and including inter-rater reliability checks for the quality assessment. Finally, the studies included were predominantly undertaken in Western English-speaking countries. While it is preferable not to limit searches to just one language due to publication language bias (Perestelo-Pérez, 2013), this was necessary in the current project due to lack of translation resource. Research from more diverse country/ cultural contexts may therefore have been missed.

1.5.3 Future research

Given these promising preliminary findings, there is a need for further research to investigate the efficacy of ACT as a parent intervention in improving parenting practices as well as child and parental mental health/ wellbeing across a range of contexts. In particular, no studies were identified that investigated the use of ACT in a generic child and adolescent mental health service context, or as a universal parenting approach. Further RCT studies comparing ACT parent interventions with existing evidence-based treatments would strengthen the evidence base and help inform clinical practice. A strength of the ACT parenting research to date is that it has examined the impact of ACT on the proposed mechanisms of change, that is,

psychological flexibility. It is also positive that measures of parenting-specific psychological flexibility are now available, particularly because generic measures of psychological flexibility do not always generalise well to specific contexts (Burke & Moore, 2014). Future research might continue to draw upon these measures to investigate whether these processes mediate positive outcomes. Finally, ACT targets behaviour change rather than symptom reduction and is therefore well suited to the parenting context where parental behaviours are of interest. This means that there is scope for innovative research designs and approaches to measuring changes in parenting behaviour.

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Chapter 2: Empirical Paper

The role of trait emotional intelligence in protecting adolescents against the negative impact of stress on their mental health

In preparation for submission to the British Journal of Psychology (See Appendix F for author instructions for submission).

Overall chapter word count (excluding tables, figures, footnotes and references):

7,592

2.0 Abstract

Adolescents are exposed to an array of stressors which may impact their mental health. It is crucial to identify factors that can reduce their risk of developing mental health difficulties. This study explores whether trait emotional intelligence can protect adolescents from the negative consequences arising from the stress of daily hassles on their mental health.

Data was collected from 268 adolescents across four UK schools and colleges using a cross-sectional design. Participants completed questionnaire measures of daily hassles, perceived stress, life satisfaction, mental health difficulties and trait emotional intelligence. Two moderated mediation models were tested to assess whether the mediated relationship between daily hassles, perceived stress and both life satisfaction and mental health difficulties were moderated by trait emotional intelligence.

It was found that the more daily hassles adolescents experience, the more stress they perceive and in turn the lower their life satisfaction and higher their mental health difficulties. The mediation models tested held for adolescents with low and medium levels of trait emotional intelligence, however, they broke down for those with the highest levels of trait emotional intelligence. For these young people, stress had less of an impact on their mental health suggesting emotional intelligence is a protective factor.

These findings highlight the role of daily hassles and trait emotional intelligence in influencing adolescents' mental health. It is argued that interventions aimed at improving young people's wellbeing might simultaneously target emotional intelligence and daily hassles that lead to stress. Implications for schools and colleges are discussed.

Key words: Trait emotional intelligence; child; adolescent; mental health

2.1 Introduction

2.1.1 Mental health in adolescents

Adolescents are exposed to a wide array of stressors which may impact their mental health (Fink et al., 2015; Mental Health Foundation, 2016; Office for National Statistics, 2015). A major survey carried out in England in 2017 found that one in eight 5 to 19-year olds had a diagnosable mental health condition, and the prevalence increased with age (NHS digital, 2018). Further, many young people are unable to access specialist child and adolescent mental health services support due to high demand (Children's Commissioner, 2017). As such, pressure is increasing on universal services such as schools to take a greater role in supporting children and adolescents with their mental health (Brown, 2018; Department of Health and Department for Education, 2017). It is crucial to identify the mechanisms via which stressors impact on young people's mental health and to explore potential protective factors which can reduce the risk of them subsequently developing mental health difficulties, in order to inform universal prevention and/ or early intervention programmes (Panter-Brick & Leckman, 2013; Zolkoski & Bullock, 2012).

In keeping with the World Health Organisation definition (World Health Organization, 2004), this research considers mental health to be more than the absence of mental health conditions, and to represent a state of well-being. Self-reported life satisfaction is considered as a positive indicator of mental health, as this has been associated with an array of social, psychological and behavioural benefits for adolescents (Proctor, Linley & Maltby, 2010).

2.1.2 Stress and mental health

2.1.2.1 The perception of stress and mental health

Stressors refer to actual or perceived threats. It has been theorised that when a person appraises a potential stressor as threatening and believes that they may have

insufficient resources to cope with it, they will perceive stress (Cohen, Kamarck & Mermelstein, 1983; Lazarus, 1977). This experience of stress results in a physiological stress response and, if prolonged, can increase the risk of people developing mental health difficulties (Schneiderman, Ironson, & Siegel, 2005). The perception of stress has been associated with a greater incidence of mental health difficulties (Abdollahi, Carlbring, Khanbani & Ghahfarokhi 2016) and lower life satisfaction (Abolghasemia & Varaniyab, 2010) in adolescents.

2.1.2.2 Daily hassles and mental health

Daily hassles refer to commonly occurring stressors described as “*irritating, frustrating demands that occur during everyday transactions with the environment*” (Holm & Holroyd, 1992, p. 465). These minor everyday stressors may be a better predictor of mental health difficulties than major life events (Johnson & Sherman, 1997). The frequency of daily hassles has been shown to predict adolescent mental health difficulties in cross-sectional (Wright, Creed & Zimmer-Gembeck, 2010) and longitudinal (Carter., Garber, Ciesla & Cole, 2006; Tessner, Mittal & Walker, 2011) research. Further, a greater frequency of everyday stressors has been associated with reduced life satisfaction in adolescents (Proctor, Linley & Maltby, 2009; Wright et al., 2010).

2.1.2.3 Perceived stress as a mediator in the stressor – mental health relationship

Based on this evidence, it is possible that when young people experience a greater frequency of daily hassles, their combined impact is perceived as increasingly threatening to adolescents resulting in the experience of stress (perceived stress). This would then increase their risk of poorer mental health. It is therefore proposed that perceived stress mediates the relationship between daily hassles and mental health, as is depicted in Figure 2.1.

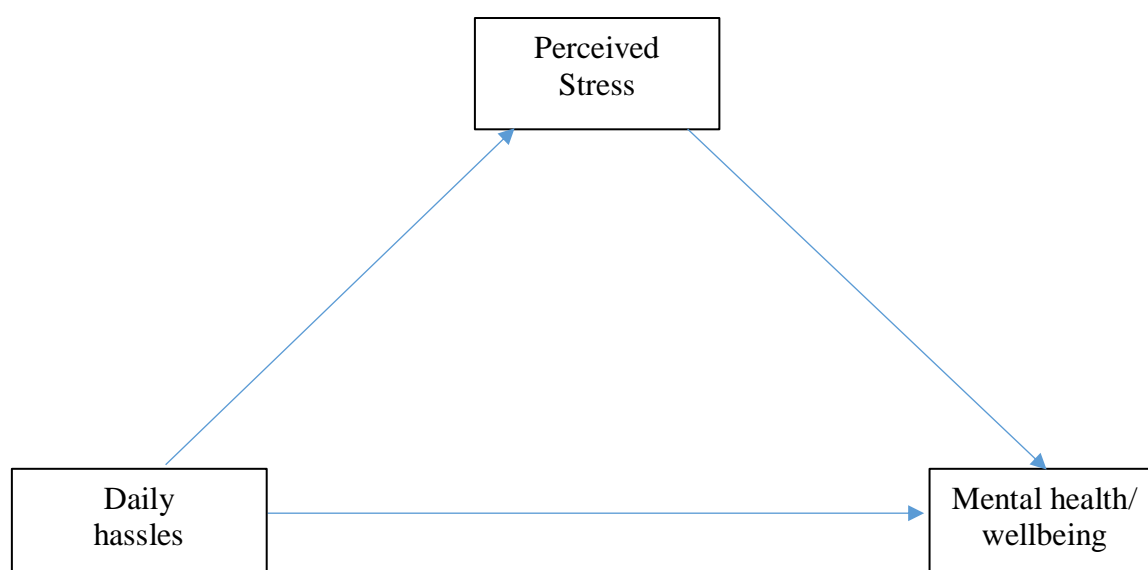


Figure 2.1 Proposed mediation model with perceived stress as a mediator in the relationship between daily hassles and mental health mental health.

2.1.3 Trait emotional intelligence

Personal resources such self-esteem and optimism have been suggested to protect people against the negative impact of stress on mental health (Schneiderman et al., 2005). Trait emotional intelligence (TEI) encompasses these factors. TEI has been developed by Petrides and colleagues (Petrides, 2001; Petrides & Furnham, 2001; Petrides, Pérez-González & Furnham, 2007), and is conceptualised as a lower level personality trait encompassing emotion-related self-perceptions and dispositions. This includes interpersonal and intrapersonal components. Distinctions have been made between TEI (usually measured by self-report) and ability models of emotional intelligence which are based on maximum performance. Petrides and Furnham (2001) outline 15 facets of TEI, based on a content analysis of salient literature, as follows: Adaptability; Assertiveness; Emotion appraisal (self and others); Emotion expression; Emotion management (others); Emotion regulation; Impulsiveness (low); Relationship skills; Self-esteem; Self-motivation; Social competence; Stress management; Trait empathy; Trait happiness; and Trait optimism.

TEI has been associated with less perceived stress (Resurrección, Salguero & Ruiz-Aranda, 2014) and mental health difficulties in adolescents, including reduced depression, anxiety, disruptive behaviour and substance misuse (Davis & Humphrey, 2012a; Resurrección et al., 2014; Cobos-Sánchez, Fluja-Contreras & Gómez-Becerra, 2017). Higher TEI has also been associated with positive indicators of mental health, such as helpful coping strategies (Resurrección et al., 2014), positive self-evaluations, resilience and life satisfaction (Di Fabio & Saklofske, 2014; Sánchez-Álvarez, Extremera & Fernández-Berrocal 2015). While the majority of this research is cross-sectional, TEI has been shown to predict mental health longitudinally (Frederickson, Petrides & Simmonds, 2012). TEI may therefore act as a protective factor against stress.

2.1.4 Trait emotional intelligence as a moderator in stress-mental health relationships

A small number of studies have examined whether TEI moderates the relationship between perceived stress or specific stressors and mental health difficulties in adolescents. Davis and Humphrey (2012b) examined the role of TEI in stressor-mental health associations in adolescents recruited from UK schools. They found that a protective function of TEI was dependent on both the stressor type and the outcome of interest. While higher TEI attenuated the negative effect of family dysfunction (for example, poor communication) on disruptive behaviour, it did not protect adolescents against depression in this context. Further, TEI did not moderate the relationship between negative life events and depression or disruptive behaviour. This suggests that TEI may not be universally advantageous when adolescents are faced with stressors. In Spanish high school students, TEI moderated the relationship between cyberbullying victimisation and both low self-esteem and high suicidal ideation, suggesting it offered some protection against the negative impact of cyberbullying (Extremera, Quintana-Orts, Mérida-López & Rey, 2018).

Abdollahi et al. (2016) found that emotional intelligence had a protective ‘buffering’ role in the relationship between perceived stress and suicidal ideation in a sample of Iranian adolescents who were being cared for by inpatient mental health services.

2.1.5 The current study

2.1.5.1 Rationale

Only a small number of studies have investigated whether TEI moderates relationships between stressors or stress and mental health, and these have been focused on mental health difficulties. While the findings suggest that it may have a protective role, more research is needed to increase our understanding of how TEI may function in stressor-mental health relationships.

The current research contributes to existing literature by testing whether TEI can protect young people against the stress of daily hassles. It expands on previous studies by including both a positive and negative indicator of mental health.

2.1.5.2 Research questions

This study aims to answer the question:

“Does trait emotional intelligence (TEI) protect adolescents from the negative consequences arising from the stress of daily hassles on their mental health?”

More specifically:

- 1) Is the mediated relationship between Daily Hassles, Perceived Stress and Life Satisfaction, moderated by TEI?
- 2) Is the mediated relationship between Daily Hassles, Perceived Stress and Mental Health Difficulties, moderated by TEI?

Based on the literature reviewed, a moderation effect is expected whereby high TEI will reduce the strength of the relationships between perceived stress (arising from daily hassles), and both adolescent mental health difficulties and life satisfaction. In other words, high TEI will reduce the risk of stress negatively impacting young people’s mental health.

2.2 Methods

2.2.1 Design

This study employed a cross-sectional design. Questionnaires measuring life satisfaction, stress, TEI and mental health difficulties were used to collect quantitative data from participants at a set point in time.

2.2.2 Participants

2.2.2.1 Sample size calculations

Kline's (2013) recommendation of a 20:1 sample size-to-parameters ratio for structural equation modelling was used to determine a minimum sample size of 80. Larger sample sizes are preferable in regression (Field, 2013), and was preferable in this study in order to have a more representative sample that would improve the generalisability of findings. A power analysis was not deemed appropriate because the statistical models used are based on regression analysis, and according to Kleinbaum, Kupper and Muller (1988) it is impossible to estimate regression coefficients before doing the research.

2.2.2.2 Sampling design

This study was interested in a UK population. In order to obtain a representative sample, adolescents were recruited via mainstream secondary level educational establishments using a purposeful non-probability design (Battaglia, 2008). The inclusion and exclusion criteria shown in Table 2.1 were used to determine adolescents' eligibility for the study.

Table 2.1: Inclusion and Exclusion criteria

Criteria	Inclusion	Exclusion
Age	Adolescents aged 11-18 years	< 11 years or > 18 years
Gender	Any gender	None
Educational establishment	Main stream, secondary level	Not in education
Language ability	English speaking	Low English literacy levels

Adolescents of any gender could take part in the study. Participants had to be aged between 11-18 years of age in line with the age of secondary level education or training in the UK (Department for Education, 2018) and the age that adolescents typically transition to adult healthcare services (Care Quality Commission, 2014, 2018). Whilst this did not capture adolescents who had left school or college after they turned 16 years, Department for Education (2018) statistics show that the majority of students remain in post-16 education (86% in 2015/16). Adolescents with low English literacy levels such that they would have been unable to read the questionnaire instructions and items, were not eligible to take part.

Participants were initially recruited from secondary schools in a UK Midlands county where the primary researcher was aware of a county-wide interest in improving mental health support in schools. Efforts were made to contact all mainstream secondary education establishments in this county, initially by telephone then followed up with an email. One school and one 6th form college were recruited as a result. The recruitment area was expanded due to concern that a representative sample size would not be drawn from these two establishments, and in order to recruit a more diverse sample. An additional school and 6th form college were each contacted.

2.2.2.3 Sample characteristics

Participants were recruited from two secondary schools and two 6th form colleges spanning 3 counties across England and Wales; Herefordshire, Worcestershire and

Flintshire. The number of participants recruited and socio-economic indicators for each establishment are shown in Table 2.2.

Table 2.2 Characteristics of participating education establishments

School/ 6 th form college	Students recruited	Indicator of socio-economic status	
		Measure of deprivation	Attainment measure
English school 1	55	DPP: 39.2%	A8: 33.7
English school 2	83	DPP: 15.35%	A8: 50.1
English college	32	-	Destinations: 90%
Welsh college	98	Deprived localities: 30%	-

Note: All data taken from Gov.UK or school/ college websites; Missing data is due to discrepancies in data collected by schools and colleges, and between English and Welsh establishments.

A8 = Attainment 8 score, based on how well pupils perform over 8 GCSE subjects including English, Math and Science (possible range 0-90; In England all schools average is 44.5; Department for Education, 2016), data from 2018.

Destinations = Students staying in education or employment for at least 2 terms after 16 to 18 (level 3) study.

Deprived localities refers to students from deciles 1-3 from the Welsh Index of Multiple deprivation (WIMD). WIMD ranks small areas in Wales from 1 (most deprived) to 1,909 (least deprived; Jones, 2015).

DPP = pupils eligible for Deprived Pupil Premium, data from 2016-2017.

A total of 268 adolescents participated in the study (115 males, 152 females, 1 gender neutral). Eleven participants did not record their age on their questionnaires, however gate keepers at participating schools confirmed that all fell within the age range of 11-18 years. The distribution of participants across this range is shown in Figure 2.2. Of adolescents who recorded their age, the mean age was 15.44 years ($SD=1.966$), and the modal age was 17 years.

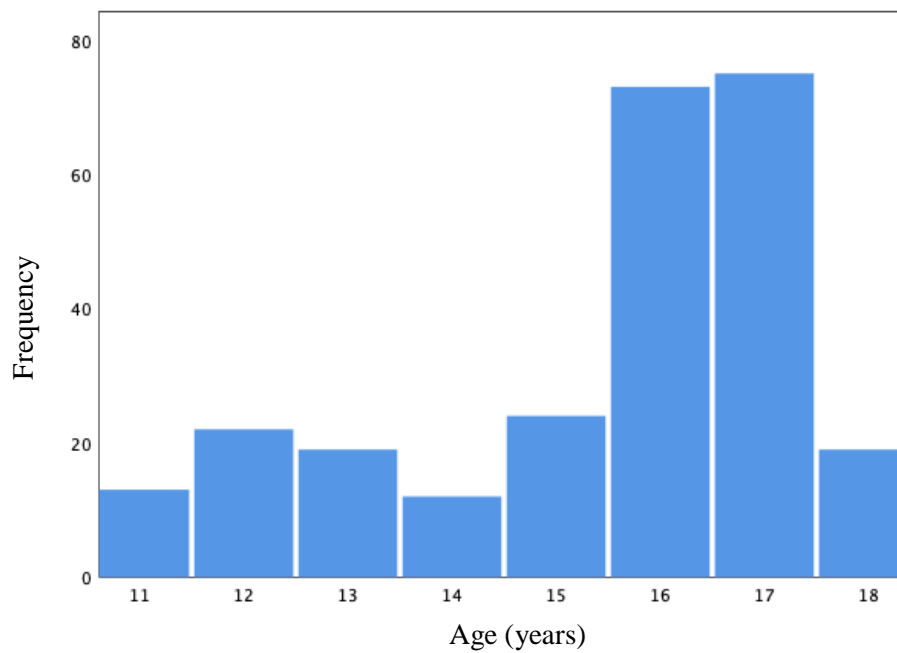


Figure 2.2 Histogram showing the distribution of participants across the study age range

2.2.3 Measures

A battery of pen and paper questionnaire measures were used to collect data on the variables of interest, comprising a total of 89 items (Appendix G). Participants were asked to indicate their age (in years) and gender. The order the questionnaires were presented in was counterbalanced using an online randomiser tool⁹ to prevent order effects.

2.2.3.1 Stress

Brief Daily Hassles Scale

The Brief Daily Hassles Scale (Wright et al., 2010) was administered to examine the frequency of occurrence of common stressors in this sample of adolescents. This scale was designed to measure the frequency of occurrence, rather than perceived intensity, of each stressor. It consists of 14 items representing hassles occurring during interactions with parents, friends and others. Items include “*Parents not trusting me*” and “*Being bullied or teased*”. Four additional items (items 15-18) were added to

⁹ Randomiser tool available at <https://www.random.org/lists/>

provide contextual information for the current research¹⁰ but were not included in the main analysis in order to ensure comparability with other research. Participants rate how often each hassle happened in the last month on a 5-point Likert scale ranging from “*never*” to “*daily*”. A higher score indicates more frequently occurring stressors (range 0-72). Existing validity and reliability data indicate that the Brief Daily Hassles Scale has good reliability with samples of 15-17-year olds (parents scale $\alpha=.88$; friends and others scale $\alpha=.82$). Frequency of hassles is positively associated with depression and anxiety, and negatively associated with life satisfaction (Wright et al., 2010). In the current study, the internal consistency reliability was good (parents scale $\alpha=.84$; friends and others scale $\alpha=.74$).

Perceived Stress Scale

The 10-item version of the Perceived Stress Scale (Cohen et al., 1983) was used as a measure of the experience of stress. The Perceived Stress Scale was designed to measure the degree to which a person perceives situations in their life as stressful. Items tap into how unpredictable, uncontrollable, and overloaded people find their lives, for example: “*In the last month, how often have you found that you could not cope with all the things that you had to do?*” Respondents rate the frequency of occurrence of each item over the past month on a Likert-type scale from “*never*” to “*very often*”. A higher score indicates higher perceived stress (scoring range 0-40). The construct and criterion validity of the Perceived Stress Scale has been evidenced in adult (Cohen, et al., 1983) and adolescent (Abdollahi et al., 2016) samples. Both the 14-item ($\alpha=.87$, Mahon, Yarcheski, Yarcheski & Hanks, 2007; $\alpha=.87$, Yarcheski, Mahon & Yarcheski, 2011) and the 10-item ($\alpha=0.85$, Abdollahi et al., 2016) versions have demonstrated good reliability in adolescent populations. In the current study, the internal consistency reliability was good ($\alpha=.86$).

2.2.3.2 Life satisfaction

¹⁰ The primary researcher consulted with one of the questionnaire authors (Creed, P.) regarding the validity of the Brief Daily Hassles Scale with younger adolescents. Advice was given to discuss the questionnaire with young people in order to determine whether additional items should be added. Young people from a local mental health charity were consulted and informed the addition of four items (see Appendix 2).

Life satisfaction was measured using the Brief Multidimensional Students' Life Satisfaction Scale, Peabody Treatment Progress Battery version (BMSLSS-PTPB; Bickman et al., 2010). The BMSLSS-PTPB comprises six items requiring adolescents to rate their satisfaction with their family life, friendships, school experience, themselves, where they live and their life overall. All items use the item stem "*How satisfied or dissatisfied are you with...*". Items are rated on a five-point Likert type scale ranging from "very dissatisfied" to "very satisfied". The scores are then averaged to derive a full-scale score (scoring range 1-5). A higher score indicates greater life satisfaction, a lower score indicates dissatisfaction. Seligson, Huebner and Valois (2003) provide evidence of the validity of the BMSLSS for research purposes. The revised measure has demonstrated acceptable inter-item reliability in clinical samples of 11-18 year olds ($\alpha=.77$; Athay, Kelley & Dew-Reeves, 2012) and confirmatory factor analysis found that the BMSLSS-PTPB is a single-construct measure (Bickman et al., 2010). In the current study, the internal consistency reliability was good ($\alpha=.81$).

2.2.3.3 *Mental health difficulties*

Strengths and Difficulties Questionnaire

The "total difficulties" scale of the Strengths and Difficulties questionnaire (SDQ) self-rated version for 11-17-year olds (Goodman, 1997) was used as a measure of mental health difficulties. The SDQ is a brief behavioural screening questionnaire covering several domains of mental health and psychological functioning. Twenty-five items load onto five factors/ subscales of emotional symptoms, conduct problems, hyperactivity/ inattention, peer relationship problems and prosocial behaviour. Items such as "*I usually do as I am told*" and "*I worry a lot*" are rated as "*Not True*", "*Somewhat True*" or "*Certainly True*". Missing items for each subscale can be scaled up pro-rata if at least 3 (of 5) items are complete. The total difficulties scale is the sum of all items other than 'prosocial behaviour' items (scoring range 0-40). A higher score indicates greater behavioural and emotional difficulties. The SDQ has been used extensively in research and clinical settings worldwide and is a good predictor of child mental health problems in UK samples (Goodman, 2001; Goodman and Goodman, 2009; Goodman & Goodman, 2011). Based on a UK normative sample of adolescents aged 11-17 years, 80% of adolescents are expected to score between 0-14, classified

as “close to average”, and 5% are expected to score between 20-40, classified as “very high” (SDQinfo, 2016). The total difficulties scale has been shown to have good reliability in samples of British adolescents ($\alpha=.80$; Goodman, 2001). In the current study, the internal consistency reliability was acceptable ($\alpha=.76$).

2.2.3.4 Trait Emotional Intelligence (TEI)

Trait Emotional Intelligence Questionnaire-Adolescent Short Form

TEI was measured using the Trait Emotional Intelligence Questionnaire-Adolescent Short Form (TEIQue-ASF; Petrides, 2009; Petrides, Sangareau, Furnham & Frederickson, 2006). The TEIQue-ASF can be used with adolescents as young as 11 years old. The questionnaire consists of 30 items based on the aforementioned 15 facets of TEI, for example “*It’s easy for me to talk about my feelings to other people*” and “*I’m able to cope well in new environments*”. Items are rated on a 7-point Likert type scale ranging from “disagree” to “agree”. The items make up four subscales representing domains of emotionality (being in touch with one’s own and other’s emotions), self-control (management of own emotions), sociability (agency in social contexts) and well-being (a general sense of wellbeing; see Appendix H for facets of TEI associated with each domain). Higher scores represent higher emotional intelligence. The global TEI score, derived from the average of all questionnaire items, was used for the current study (scoring range 1-7). In line with scoring instructions, missing items were coded as the middle value (4) providing that an adolescent did not miss more than 15% of items. The global TEI score has demonstrated good reliability with adolescent samples ($\alpha= .082$, Frederickson et al., 2012; $\alpha= .081$; Davis & Humphrey 2012b). The internal consistency reliability in this sample was good ($\alpha= .89$).

2.2.4 Procedure and ethical considerations

2.2.4.1 Recruitment and data collection

Prior to recruiting schools, Ethical approval for the study was granted by Coventry University Research Ethics Committee (Appendix I). The research was conducted in

accordance with the British Psychological Society Code of Human Research Ethics (2014).

The primary researcher contacted schools and 6th form colleges by telephone to discuss the research and what school participation would involve, and followed up with written information via email (Appendix J). In order to proceed with recruitment, written consent was required from the head teacher / principle and a member of staff had to be allocated as the lead gatekeeper supporting the research. Parental informed consent was required in order for adolescents under 16 years of age to take part in the study. Gatekeepers from participating schools and colleges identified class/ tutor groups to recruit from and distributed parent information sheets (Appendix K) and consent forms (Appendix L) to the parents of students in those class groups who were under 16 years of age. Parents were asked to return forms to school/ college gatekeepers. Students over the age of 16 years consented for themselves and no parental consent was sought. Gatekeepers then made arrangements for the primary researcher to visit the school/ college to collect data at the least disruptive time during the school day.

Adolescents completed the study in groups of approximately 20-30 students depending on classroom sizes. They were given written information about the research (Appendix M) along with an assent (under 16-years; Appendix N) or consent (16 years and over; Appendix O) form. The primary researcher also gave verbal information and instruction to adolescents and was present to answer any questions. The researcher ensured that all signed young person and parent consent forms (where applicable) were seen prior to participants completing their questionnaires in keeping with the study's ethical protocol. The primary researcher and a member of school/ college staff remained present throughout data collection to ensure confidentiality and independence of responding. The questionnaires took approximately 25 minutes to complete. Following completion, participants were given a debrief form (Appendix P) with further information about the study, informing them of how they could withdraw from the research and providing details of local emotional wellbeing support. Anonymised itemised questionnaire data was later input into a spreadsheet by the primary researcher.

2.2.4.2 Additional ethical considerations

In order to ensure that participants could easily and freely choose not to participate in the research, their right to not participate or to withdraw was emphasised. Arrangements were made with each participating school/ college for what they could do if they did not complete questionnaires (usually return to their classes). Three adolescents attended data collection and decided not to complete questionnaires. One started completing their questionnaires then asked for them to be shred, and another asked their school to contact the primary researcher to remove their questionnaires from the research. Participants were made aware that if they disclosed any information that gave cause for concern about risk of harm to themselves or anyone else, the primary researcher would inform the school. The school would then follow their usual procedures for addressing such concerns. All questionnaires were checked by the primary researcher on the day of completion to ensure no concerning information had been written in addition to questionnaire completion.

2.2.5 Data analysis

The data was analysed using the IBM SPSS Statistics software (SPSS) version 25 and Andrew Hayes' PROCESS macro v3.3, model 14 (Hayes, 2017).

2.2.5.1 Data checks

Before running the main analysis, initial data checks were undertaken. Missing data points were managed in accordance with specific questionnaire instructions where applicable or coded as 999. The data was examined to ensure all data points fell within the correct scoring range for all scales. To check the distribution of the data on the main study variables, histograms showing the distribution of scores for each measure (Appendix Q) and z-scores were examined. On the life satisfaction scale, a slight negative skew was observed with more adolescents leaning toward the satisfied (as opposed to dissatisfied) end of the scale (skewness of $-.483$). A positive skew was observed on the daily hassles scale (skewness of $.908$) whereby adolescents tended to

report a low frequency of hassles. The data appeared approximately normally distributed on the other 3 scales. At least 95% of z-scores fell within between of 1.96 to -1.96 on all scales, and no z-scores were greater than 3.29 suggesting there were no significant outliers. Descriptive statistics were used to examine data from the Daily Hassles questionnaire.

2.2.5.2 Main analysis: Moderated mediation using PROCESS

In order to answer the two sub-questions of this study, two moderated mediation models were tested. Model 14 of PROCESS produces regression statistics to test the mediating pathways (a , b and c) depicted in Figure 2.3. It then breaks this mediation model down into low, medium and high values of the moderating variable, and tests whether the relationships still hold when the b -path is moderated three times. Finally, it tests the indirect mediation effect in the model at low, medium and high levels of the moderator. For the current analysis, the moderator variable (TEI) was split into three categorical variables of low (bottom 10%), medium (middle 80%) and high (top 10%) TEI.

PROCESS uses non-parametric bootstrapping methods to estimate parameters. 10,000 bootstrap samples were used to calculate bootstrap confidence intervals in the current analysis. A 95% level of confidence was used for all confidence intervals.

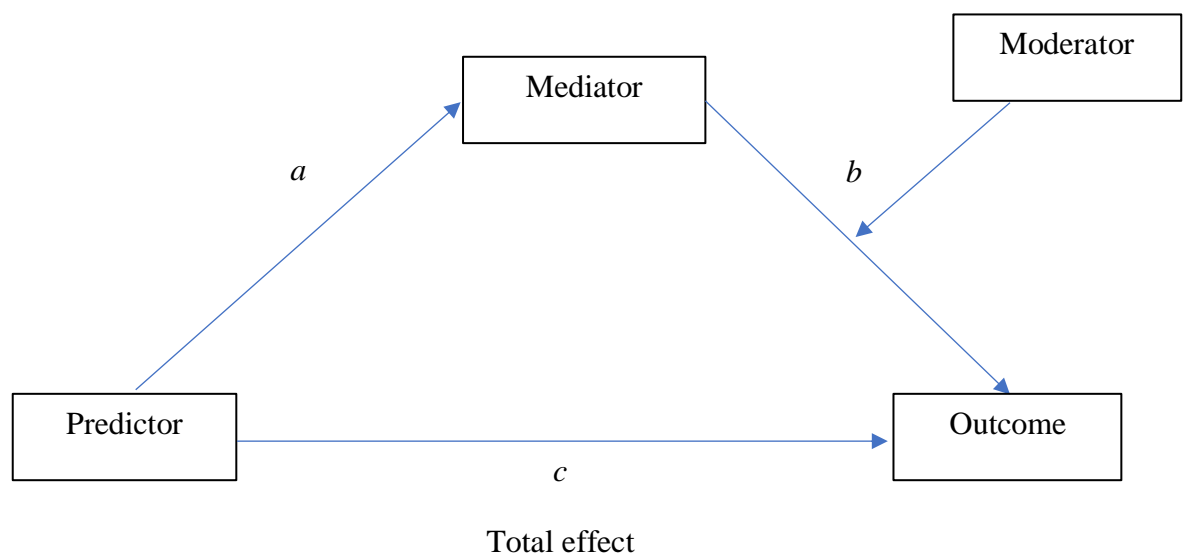


Figure 2.3 Conceptual model of moderated mediation.

2.2.5.3 Assumptions for moderated mediation

The use of bootstrapping increases the robustness of the current analysis and mitigates against non-normally distributed variables. The sample was large enough to ensure adequate power and was selected to be representative of adolescents in main stream education in the UK.

2.3 Results

2.3.1 Descriptive statistics

2.3.1.1 Frequency of occurrence of daily hassles

The frequency of occurrence of daily hassles were first examined in order to better understand stressors impacting this sample of adolescents. Mean scores (M) for each questionnaire item/ hassle ranged from $M=.22$ (item 12, '*not feeling safe at school*') to $M=2.12$ (item 17, '*feeling stressed about school work*'). This indicates that while adolescents usually felt safe at school, on average they experienced stress about school work on at least a weekly basis (based on an item score of 0 representing '*never*' and 2 representing a frequency of '*at least once per week*'). It was found that, for the majority of items, the modal score was zero indicating that it was most common for adolescents to report never experiencing the corresponding hassle. '*Parents being strict*', '*People not treating me with respect*' and '*Feeling people are disappointed in me*' were most commonly rated as occurring '*at least once a month*' (modal item score of 1; also reflected in mean scores $M=1.43$, $M=.96$ and $M=1.13$ respectively). '*Feeling stressed about exams*' was most commonly rated as occurring '*at least once a week*' (modal item score of 2; $M=1.95$), and '*Feeling stressed about school work*' was most commonly rated as occurring '*almost daily*' (modal item score of 3; $M=2.12$). As such, in this sample the most frequently occurring stressors were related to academic pressures. Girls reported a higher frequency of occurrence of hassles ($M=19.13$) than boys ($M=15.46$).

2.3.1.2 Main study variables

Descriptive statistics and zero-order correlations among the main variables are presented in Table 2.3. Moderate to high correlations were found between all variables. In the current sample, the mean score for the 14-item version of the daily hassles scale was 10.97 ($SD = 8.08$) of a possible scoring range of 0-56. The mean perceived stress score was 18.43 ($SD = 7.21$) of a possible range 0-40. This is slightly higher (suggesting more stress) than a normative sample of young adults in the USA ($M = 14.2$; Cohen & Williamson, 1988) and lower than a sample of inpatient adolescents in Iran ($M = 21.14$; Abdollahi et al., 2016). The mean life satisfaction score was 3.88 ($SD = .74$) of a possible range of 1-5, suggesting that adolescents lean toward satisfaction rather than dissatisfaction with their lives. This is in keeping with previous research (Proctor et al., 2009). The mean score for the SDQ total difficulties scale was 12.90 ($SD = 5.47$) of a possible range 0-40, with 61.9% of participants falling within “close to average” range and 12.3% falling within the “very high” range. This indicates high levels of mental health difficulties in this sample. The mean TEI score in the current sample was 4.49 ($SD = .82$) of a possible range 1-7. This is comparable to another UK-based sample of non-clinical adolescents aged 11-16 years ($M = 4.44$ ($SD = .68$) when converted to the same scale; Davis & Humphrey, 2012b).

Table 2.3 Descriptive statistics and Pearson’s correlations among study variables

Variable	N (missing data)	Mean (Std. Deviation)	Pearson’s correlations				
			Daily Hassles	Perceived Stress	Life Satisfaction	Mental Health Difficulties	TEI
Daily Hassles (14 item) (Scoring range 0-56)	261 (7)	10.97 (8.08)	1				
Perceived Stress (Scoring range 0-40)	258 (10)	18.43 (7.21)	.502*	1			
Life Satisfaction (Scoring range 1-5)	263 (5)	3.88 (.74)	-.509*	-.601*	1		
Mental Health Difficulties (Scoring range 0-40)	268 (0)	12.90 (5.47)	.601*	.652*	-.524*	1	
TEIQ (Scoring range 1-7)	268 (0)	4.49 (.82)	-.559*	-.696*	.647*	-.738*	1

Note *= $p < .001$ (2-tailed)

2.3.2 Is the mediated relationship between Daily Hassles, Perceived Stress and Life Satisfaction, moderated by TEI?

The conceptual model addressing this question and regression coefficients for paths *a*, *b* and *c* are presented in Figure 2.4

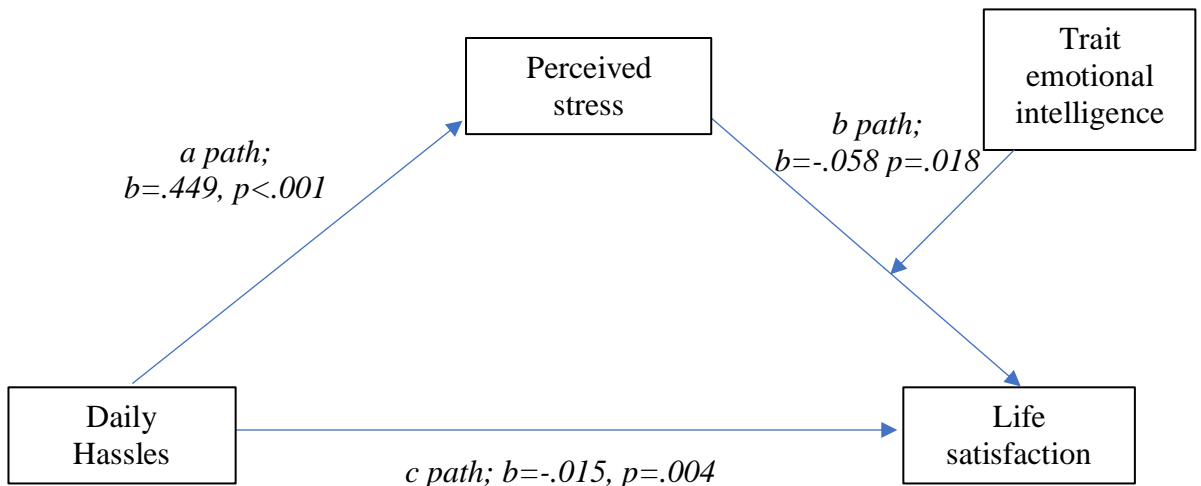


Figure 2.4 Model 1: TEI as a moderator of the daily hassles – perceived stress – life satisfaction relationship.

There seems to be a direct negative association between the daily hassles that adolescents experience and their overall level of life satisfaction; (path-c – $B = -.015$, $t(244) = -2.886$, $p = .004$), [$CI(95\%)$ -.025 to -.005]. This suggests that the more daily hassles adolescents experience, the more dissatisfied they become. The evidence indicates that this association may be mediated by their perceived levels of stress. A positive association between the frequency of daily hassles reported by adolescents and their perceived stress can be observed; (path-a – $B = .449$, $t(247) = 9.103$, $p < .001$), [$CI(95\%)$, .351 to .545]. The data also shows that higher perceived stress is negatively associated with life satisfaction; the more stress young people perceive, the more dissatisfied they are with life (path b – $B = -.058$, $t(244) = -2.384$, $p = .018$), [$CI(95\%)$ -.105 to -.010].

This research is primarily interested in whether this mediational pattern is moderated by TEI. In particular, do levels of perceived stress (arising from experiencing daily hassles) inevitably lead to lower life satisfaction, or does TEI help moderate this association? In order to test this, we need to consider the degree to which TEI interacts with the relationship between perceived stress and life satisfaction (path b). Here, the evidence suggests that no significant interaction effect could be identified ($B = .006$, $t(244) = 1.221$, $p = .223$), [$CI(95\%)$ $-.004$ to $.016$]. This suggests that TEI has no influence as a resilience factor in helping to reduce the association between stress and life satisfaction. However, while the overall outcome was not significant, there does seem to be a trend in the data which is worth considering.

Figure 2.5 is a graph reporting regression slopes depicting the relationship between perceived stress and life satisfaction at three levels of TEI; Low (bottom 10%), Medium (middle 80%) and High (top 10%). TEI has been transformed into a categorical variable so that the output can be more easily interpreted, however, this pattern is similar to the percentile pattern option available in PROCESS for continuous variables. It can be observed on the graph that the regression slope for adolescents with low and medium levels of TEI appears to differ from that of adolescents with the highest levels of TEI. Firstly, at the lowest levels of perceived stress, adolescents with high TEI report greater life satisfaction than those with medium and low levels of TEI. Secondly, for adolescents high in TEI, the level of decline in life satisfaction as stress increases is much less dramatic relative to the other two TEI groups, in other words, this association is weakened. This suggests that stress has less of an impact on life satisfaction in young people high in TEI, supporting a moderation trend.

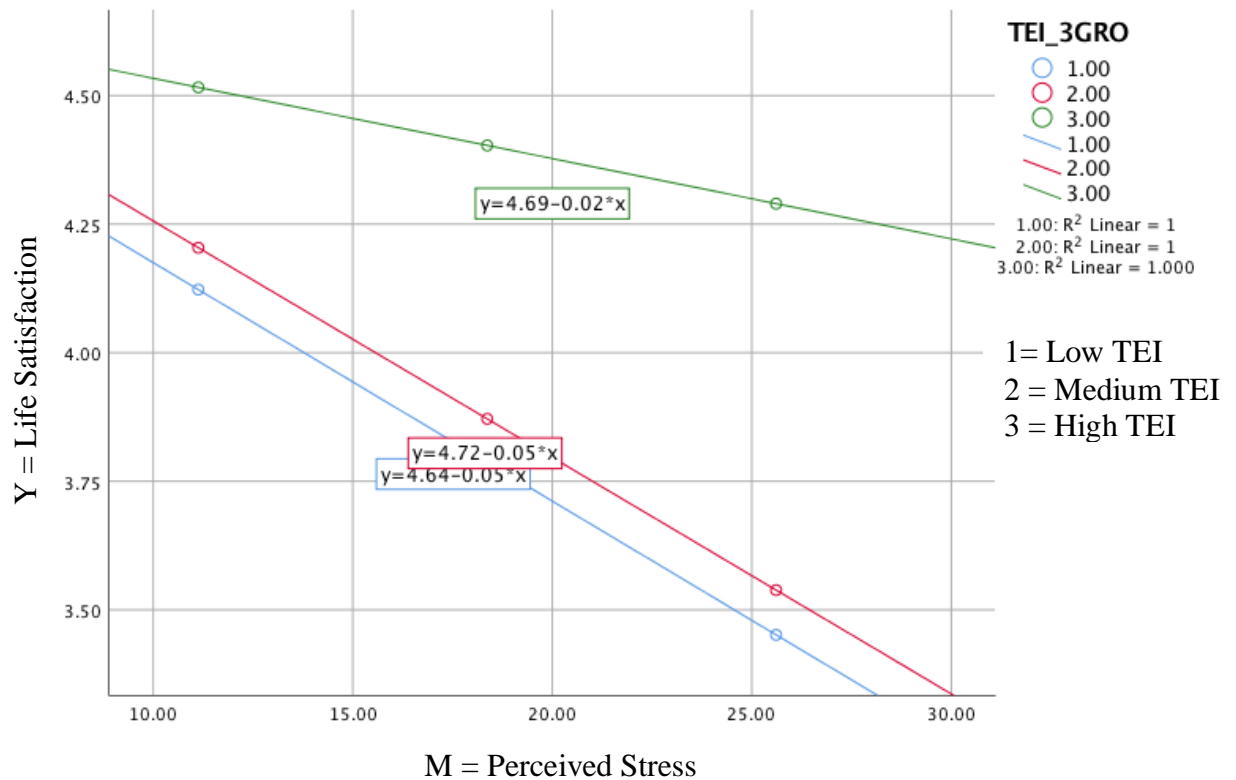


Figure 2.5 Graph modelling regression slopes in the perceived stress to mental health difficulties relationship at different levels of TEI

Additional support for this interpretation of the data can be found by observing the indirect effects of the mediation model at different levels of the moderator (see Table 2.4). For adolescents in both the low and medium TEI groups, an indirect effect supports perceived stress as a mediator in the daily hassles – life satisfaction relationship: Daily Hassles – Perceived Stress – Life Satisfaction [$CI(95\% \text{ LOW TEI})$ -.051 - -.002 and $CI(95\% \text{ MEDIUM TEI})$ -.029 to -.013]. However, for the high TEI group, the mediational model seems to include the possibility of no indirect effect which is evident from the fact that the confidence intervals intersect zero [$CI(95\% \text{ HIGH TEI})$ -.015 to .003]. This suggests that the mediational pattern is broken at path b – Perceived Stress to Life Satisfaction. In other words, perceived stress does not appear to hold as significant predictor of life satisfaction for adolescents who have high levels of TEI.

Table 2.4 The indirect effects of daily hassles on life satisfaction via perceived stress

	<i>B</i>	<i>Boot SE</i>	<i>Boot 95%CI</i>
Low TEI	-.021	.012	-.05 to -.002
Medium TEI	-.021	.004	-.029 to -.013
High TEI	-.007	.005	-.015 to .003

2.3.3 Is the mediated relationship between Daily Hassles, Perceived Stress and Mental Health Difficulties, moderated by TEI?

The conceptual model addressing this question and regression coefficients for paths *a*, *b* and *c* are presented in Figure 2.6.

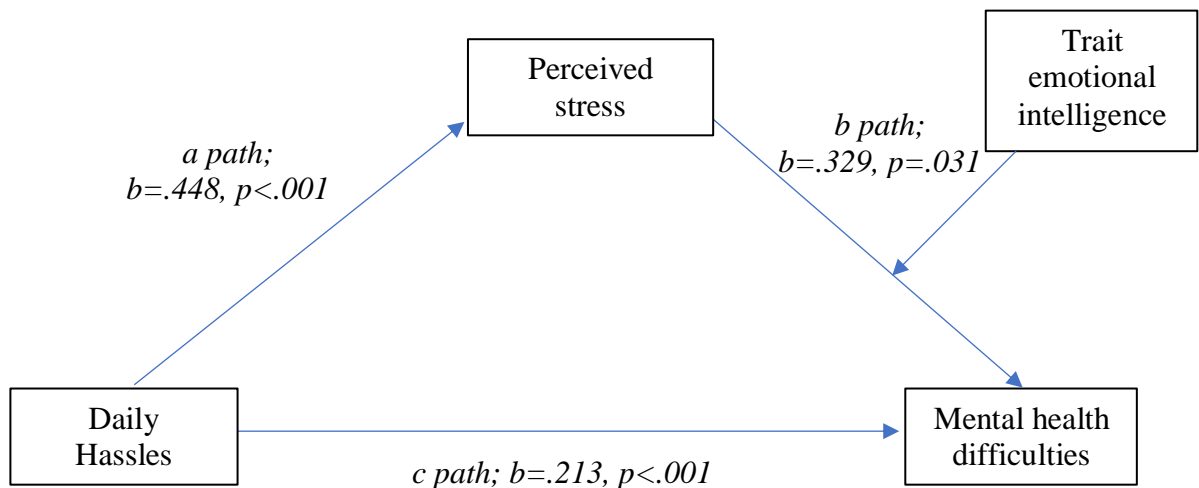


Figure 2.6 Model 2: TEI as a moderator of the daily hassles – perceived stress – mental health difficulties relationship.

The frequency of daily hassles reported by adolescents appears to be directly positively associated with their self-reported mental health difficulties; (path-c – $B = .213$, $t(246) = 6.434$, $p < .001$), [$CI(95\%) .148$ to $.278$]. The data supports perceived stress as a mediator in this relationship. Daily hassles was positively associated with perceived stress in this sample of adolescents; (path-a – $B = .448$, $t(251) = 9.189$, $p < .001$), [$CI(95\%) .352$ to $.544$]. Perceived stress was also positively associated with mental health difficulties (path-b – $B = .329$, $t(246) = 2.168$, $p < .031$), [$CI(95\%) .03$ to $.629$]. This suggests that the more daily hassles adolescents experience, the more stress they perceive and the higher their self-reported mental health difficulties.

In order to test whether TEI helps moderate the association between perceived stress (arising from daily hassles) and mental health difficulties, the degree to which TEI interacts with the b-path was assessed. No significant interaction effect was found ($B = -.049$, $t(246) = -.317$, $p = .742$), $[CI(95\%) -.358 \text{ to } .259]$. However, as with the previous model, graph modelling of the regression slopes (see Figure 2.7) suggests that the relationship between perceived stress and mental health difficulties differs at low and high levels of TEI. It can be observed that when perceived stress is at its lowest, adolescents in the low TEI group report a greater level of mental health difficulties compared to those in the high TEI group. Further, mental health difficulties can be seen to increase at a greater rate as perceived stress increases for those in the low TEI group compared to the high TEI group. This suggests that perceived stress is more strongly correlated with mental health difficulties in adolescents with low TEI. In other words, stress has a greater impact on mental health difficulties in adolescents lower in TEI compared to those who self-report higher levels of TEI.

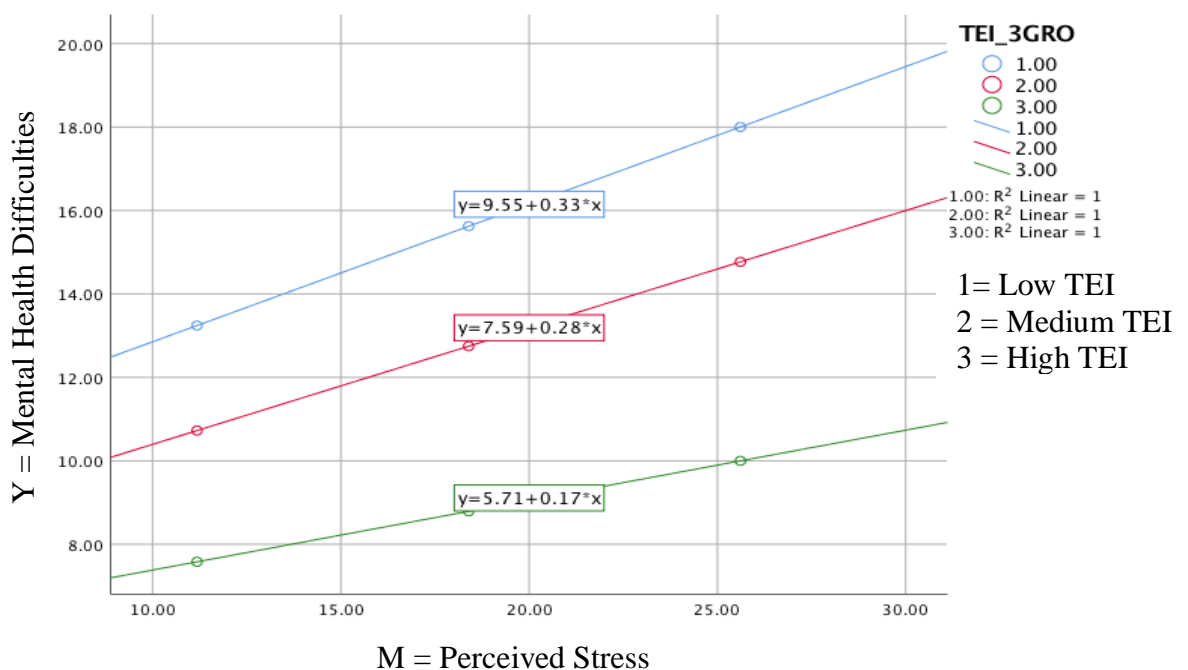


Figure 2.7 Graph modelling regression slopes in the perceived stress to mental health difficulties relationship at different levels of TEI

Observation of the indirect effects of the mediation model at different levels of the moderator (see Table 2.5) supports this suggestion. It can be seen that for low and medium levels of TEI, bootstrapped confidence intervals around the indirect effect support perceived stress as a mediator in the relationship between daily hassles and mental health difficulties: Daily Hassles – Perceived Stress – Mental Health Difficulties [*CI*(95% LOW TEI) .023 - .3 and *CI*(95% MEDIUM TEI) .081 to .177]. This relationship broke down in the high TEI group, as indicated by confidence intervals around the indirect effect that intersect zero: [*CI*(95% HIGH TEI) -.034 - .189]. Once again, the mediational pattern appears to break down at path b – perceived stress to mental health difficulties. In other words, perceived stress does not appear to hold as significant predictor of mental health difficulties for adolescents who have high levels of TEI.

Table 2.5 The indirect effects of daily hassles on mental health difficulties via perceived stress

	B	Boot SE	Boot 95%CI
Low TEI	.148	.070	.023 to .300
Medium TEI	.126	.024	.081 to .177
High TEI	.075	.055	-.034 to .189

2.4 Discussion

2.4.1 The role of TEI in daily hassles-stress-mental health relationships

2.4.1.1 TEI as a resilience factor

This study set out to examine whether TEI can protect adolescents against the negative impact of stress arising from daily hassles on their mental health, as assessed by self-reported life satisfaction and mental health difficulties. It was found that, as expected, a higher frequency of daily hassles is associated with greater levels of perceived stress, which is in turn associated with poorer mental health based on both positive and negative indicators. While neither of the two models tested found a significant moderation effect, closer examination of the findings showed that TEI does service a protective function. Adolescents with the highest self-reported TEI reported greater

life satisfaction and less mental health difficulties than those with lower levels of TEI. Further, stress had less of an impact on life satisfaction and mental health difficulties in adolescents with high TEI.

This is the first study to show that perceived stress can mediate a relationship between daily hassles and both life satisfaction and mental health difficulties, but that these mediation effects are moderated by TEI. The findings suggest that TEI acts as a resilience factor against stress.

The finding that TEI serves a protective function in the relationship between stress and mental health is broadly in keeping with previous research with adolescents, that has found TEI may act as a buffer against mental health difficulties (Abdollahi et al., 2016; Extremera et al., 2018). It is also in keeping with adult literature, for example Zhang et al. (2016) found that TEI mediated the relationship between negative life events and psychological distress in university students. Armstrong, Galligan and Critchley (2011) identified groups of adults who they identified as ‘vulnerable’, ‘average’ or ‘resilient’ based on the strength of the relationship between negative life events and psychological distress in these groups. They found that the groups could be distinguished by their intra- (not inter-) personal TEI levels. While these studies are cross-sectional in nature meaning that causal links cannot be inferred, the findings are supported by a small number of laboratory studies. Taken as a whole, this work suggests that higher TEI reduces the impact of experimentally manipulated stressors on negative emotional responses (see Choi, Vickers & Tassone, 2014 for a brief review).

2.4.1.2 Emotional intelligence interventions

In light of these findings, interventions that can increase TEI should be explored. A review of emotional intelligence training interventions found that TEI can be improved through intervention (Schutte, Malouff & Thorsteinsson, 2013), including in adolescent populations (Ruiz-Aranda et al., 2012; Saadi, Honarmand, Najarian, Ahadi & Askari, 2012). Just four intervention sessions have been found to improve TEI in high school students (two and a half-hour sessions; Di Fabio & Kenny, 2011) and young adult psychology students (two-hour sessions; Nelis, Quoidbach,

Mikolajczak & Hansenne, 2009) compared to comparator groups. Students in the latter study maintained benefits at a 6-month follow-up. Meta-analytic evidence also shows that school-based social and emotional learning (SEL) programmes can improve children and adolescents' social and emotional competence post-intervention and six months later (Durlak, Weissberg, Dymnicki, Taylor, Schellinger, 2011).

It is important to be mindful that while this study did not highlight any concerns in relation to emotional intelligence, not all findings have been positive (e.g. Davis and Humphrey, 2012b – reviewed in the introduction chapter to this report). Caution must therefore be exercised when developing intervention programmes. Ciarrochi, Deane and Anderson (2002) found that university students scoring highly on objective (as opposed to self-reported) emotion perception were more negatively impacted by stress on their mental health. Davis and Nichols (2016) reviewed a small body of research revealing a 'dark side' of emotional intelligence and found that these findings are not unique. They suggest that an imbalance in the components of emotional intelligence may be problematic in some contexts. For example, being hypersensitive to emotional information and/or highly aware of one's emotions but lacking in competency to repair or manage emotional states may leave someone vulnerable to high levels of stress and adversity. Similarly, having high levels of emotional skill (ability emotional intelligence) but low emotional self-efficacy (TEI) can increase risk of depression. They summarise that based on the available evidence, a balance between the domains/facets of emotional intelligence may be optimal for wellbeing.

2.4.2 The role of stress

The current research proposed that adolescents who experienced a greater frequency of everyday stressors would experience higher levels of perceived stress and as a result poorer mental health. The results support this proposition. While causation cannot be inferred in cross-sectional research, these findings suggest commonly occurring stressors, in particular those arising from parental and peer relationships, may play an important role in stress and the subsequent development of mental health difficulties. It is therefore proposed that in addition to looking at resilience factors that can be fostered in adolescents, it is also important to address the everyday stressors that may impact their mental health.

Of all the stressors assessed in the current study, adolescents reported experiencing stress in relation to school work most frequently. School-related stress has been associated with reduced life satisfaction in adolescents (Burger & Samuel, 2017; Moksnes, Løhre, Lillefjell, Byrne & Haugan, 2016; Proctor Linley, & Maltby, 2010). Further, large-scale research examining stressors in 10,941 adolescents from 20 diverse countries found that school-related and parent-related stressors were perceived as most stressful of a range of domains (Persike & Seiffge-Krenke, 2012). Efforts to reduce stress and in turn poorer mental health in adolescents might consider targeting stress arising in the parent-child relationship and from academic work.

2.4.3 Implications for policy and services

Targeting factors that can reduce young people's risk of developing mental health difficulties as early as possible and improve their mental wellbeing is highly important given that around half of diagnosable mental health conditions are known to onset by the age of 14 years, and 75% by 24 years (Kessler et al., 2005). Preventing the development of high levels of stress and mental health difficulties, is likely to have significant cost saving implications (Mental Health Foundation, 2016), and most importantly, could reduce a great deal of suffering. It is encouraging that a need to focus on prevention is recognised in the government's green paper 'Transforming children and young people's mental health provision'. The report outlines plans to "*put schools and colleges at the heart of our efforts to intervene early and prevent problems escalating*" (Department of Health and Department for Education, 2017, p. 3). With this in mind, the implications here are focused on the school/ college context. Based on consideration of the findings of this study in the context of other research, it is argued that efforts to improve young people's wellbeing and prevent mental health difficulties should simultaneously target factors such as TEI that can foster resilience, and stressors adolescents are faced with on an everyday basis.

TEI appears to act as a resilience factor against stress. Further, school-wide approaches to improve young people's emotional intelligence have been shown to be effective (e.g. Di Fabio & Kenny, 2011). Continuing to target TEI in schools therefore has the potential to improve young people's mental health and wellbeing. Researchers and

practitioners should continue to develop these intervention approaches and consider how they can best be delivered in school contexts.

An important contextual factor highlighted in this research is stress in relation to school and academic pressure. The aforementioned government green paper outlines plans to facilitate further research into preventative approaches. Researchers and decision makers might consider how academic pressure on young people can be reduced so that they can enjoy learning in an environment that is conducive to their wellbeing. There is a strong ethical argument for attending to contextual factors that lead to stress. Young people are powerless to effect many of the stressors and adversities that impact on them. A message that they must take responsibility for making change and managing this may be damaging. As Gregory (2017) articulates *“Should children be given more and more coping strategies to deal with the increasing pressure they are put under? Or should we be challenging a system that expects all children to achieve academic success and considers them to have ‘failed’ if they don’t?”* (para. 12). It is considered here that the best answer is *‘both’*.

2.5 Conclusion and future directions

2.5.1 Strengths

This study makes an important contribution to TEI literature concerning adolescents by identifying a protective role of TEI in the relationship between stress arising from daily hassles, and both life satisfaction and mental health difficulties. Further, The cross-sectional design enabled data to be collected from a large sample of adolescents from schools with a range of socio-economic catchments, and across the secondary school age range, supporting the generalisability of the findings. Drawing upon commonly used measures in the child and adolescent literature aids the comparability of this study to other research.

2.5.2. Limitations

Alongside these strengths, it is important to acknowledge the limitations of this research. The cross-sectional design does not allow for causal inferences to be made.

This is further complicated by the different recall periods of the measures used. Longitudinal research is needed to investigate the temporal ordering of the study variables. This was not possible within the time scales of this project. It is acknowledged that the measures used in the current study include some shared concepts and so common method variance may contribute to the relationship between them. However, it was intended that using well used and validated measures of the constructs of interest would mitigate against this. In keeping with much of the literature reviewed, self-report measures were used in this study. It is possible that adolescents reporting of mental health difficulties are also influenced by the other study variables, and it would therefore be useful for future research to include a wider assessment of adolescent mental health, for example, by including parent ratings. Finally, ethnicity data was not collected in the current research, primarily in order to reduce the amount of questions asked of young people. However, the schools and colleges that contributed to this project were from regions of predominantly white ethnic backgrounds. It is therefore unclear how well these findings generalise to young people from more diverse ethnic backgrounds.

2.5.3 Future research

In addition to addressing the limitations of the current study, an important direction for future research will be to investigate which elements of TEI are most important in stressor-stress-mental health relationships, and what constitutes an optimal balance of TEI facets/ domains. Cross-sectional research with adolescents has found that different domains of TEI may be differentially associated with mental health/ wellbeing (Resurrección et al., 2014), and studies reviewed in this report suggest that different elements of TEI may work differently in different contexts (Davis & Humphrey, 2012a; Kwok, Yeung, Low, Lo & Tam., 2015). A better understanding of this would inform emotional intelligence interventions. There has been a paucity of research looking at factors which may impact the development of TEI, although it has been found that parenting style may play a role (Argyriou, Bakoyannis & Tantaros, 2016). Given the potential importance of TEI as a resilience factor, future research might explore determinants of TEI. Finally, it was beyond the scope of this report to investigate gender differences in the models investigated. Future research might explore how TEI may exert effects across different genders.

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Chapter 3: Reflective Paper

**ACT as a tool for reflection: A valuable compass
through the research journey**

Overall chapter word count (excluding tables and references): 3,976

3.1 Introduction

In reviewing literature into reflection (e.g. Carmichael, 2018, Cushway & Gatherer, 2003a; Mann, Gordon & MacLeod, 2009), it is evident that there is some conceptual confusion about its meaning. Reflection means different things to different people. Most definitions and models consider how a process of critical reflection on one's experience enables effective learning from that experience, which can then act as a guide in the future. Boud, Keogh and Walker's (1985) definition of reflection speaks to what reflection means to me, by capturing the explorative and learning elements while acknowledging that reflecting on personal experience is both an intellectual and emotional endeavour. Reflection is described as "...a generic term for those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to a new understanding and appreciation" (Boud et al., 1985, p. 19). In the reflections that follow, I use Acceptance and Commitment Therapy (ACT) as a reflective framework and discuss how this helped guide me in my journey through the thesis process. In particular, I reference my struggles with epistemology and the implications of my research question. I reflect on my personal learning and development through this process, discuss the value of ACT as a reflective tool and finish with my 'committed actions'.

3.2 ACT and reflection

3.2.1 The ACT model

ACT is a behavioural therapy, aiming to help us live fulfilling lives while accepting the pain that life brings. It does this by targeting processes involved in psychological flexibility, the ability to contact the present moment and engage in values-guided actions (Harris, 2009; Hayes 2016; Hayes, Luoma, Bond, Masuda & Lillis, 2006). Table 3.1 describes the core ACT processes, expanding on Table 1.1 from Chapter 1 of this volume. It shows how the six 'Hexaflex' processes can be represented as three pillars of 'open, up', 'be present' and 'do what matters' (Harris, 2009), or broken down further into 'mindfulness and acceptance processes' and 'commitment and behaviour change processes' (Hayes et al., 2006).

Table 3.1 ACT 'Hexaflex' and 'Triflex' processes used to increase psychological flexibility, after Harris (2009) and Hayes et al., (2006)

Triflex Process	Hexaflex Process	Descriptor
Mindfulness and acceptance processes	Open up	Being willing to experience painful internal events without trying to change them
	Cognitive defusion	Taking a step back from thoughts/ images/ memories rather than getting caught up in them
	Be present	Connecting and engaging with the present moment
	Self-as-context	Connecting with the 'observing self' viewpoint where we can observe our internal experiences and notice we are distinct from them
Do what matters	Values	Connecting with what truly matters to us and using this like a compass to guide what we do
	Committed action	Taking effective action based on our personal context and values
		Commitment and behaviour change processes

3.2.2 Reflecting from an ACT perspective

Woodward, Keville and Conlan (2015) found that trainee clinical psychologists experience a need to balance self-acceptance and self-development through training. These authors consider how, paradoxically, through self-acceptance, self-development can occur. They suggest that third wave behaviour therapies such as ACT can support this process. As I have developed my understanding and clinical use of ACT over the past 3 years, I have applied the model to myself in order to ‘practise what I preach’. It was not until more recently that I recognised how ACT has become a vehicle for reflection for me. At the heart of ACT is the construct of workability, represented by the question “*Is what you’re doing working to make your life rich, full and meaningful?*” (Harris, 2009, p. 22). If the answer is yes, then it usually makes sense to keep doing it. If not, this indicates a need to look at alternative options. This is a question that I have regularly asked myself through my research journey. The mindfulness and acceptance processes in ACT have helped me to slow down and approach my struggles with a more open, curious and accepting stance in order to consider this question honestly. The commitment and behaviour change processes have helped me to identify how I want to respond to the learning that these processes bring about, and to act accordingly.

3.3 Challenges on my research journey: Self as a clinician and researcher

3.3.1 Initial enthusiasm

The first step of my research journey was to decide on an area and topic to explore for my empirical project, and from here a research question. I came to clinical psychology with a background training and working in ‘tier 2’ child and adolescents mental health roles. Here, I developed a passion for intervening early in both the life span and in the development of mental health difficulties in order to prevent mental health conditions and promote wellbeing. The human as well as the financial cost (Mental Health Foundation, 2016) of not doing so has always felt unacceptable to me. I was keen to identify ways that we can help promote young people’s mental wellbeing and facilitate resilience, the ability to maintain healthy psychological functioning when faced with

adversity and stressors (Garcia-Dia, DiNapoli, Garcia-Ona, Jakubowski & O'Flaherty, 2013; Zolkoski & Bullock, 2012). I noticed that the term 'emotional intelligence' was well used amongst schools that I visited, with several looking at ways to boost this in young people. Perhaps emotional intelligence interventions could promote resilience in students and be well suited to school settings, where the majority of young people can be reached. When I explored this further, I had a sense that practice was preceding evidence and felt that it would be useful to address this. I therefore started my research journey from a position of enthusiasm. I would collect data from lots of adolescents to see how emotional intelligence was working for them when they were faced with stress.

3.3.2 Lost in epistemology

As time went on, I began to question my use of quantitative methods. Much of this was triggered by the question of epistemology. During my research training, I have been encouraged to clearly identify my epistemological position, yet I have always felt uncomfortable with dualist positions such as positivist versus realist. I do not believe that one way of understanding the world is better or more important than another. My choice of methods had been a pragmatic one, however, the assumption behind it is one of positivism. It assumes that reality, and constructs such as emotional intelligence, can be objectively observed and measured (Creswell, 2013). This did not fit with my developing identity as a clinician. My hope for the people that I work with clinically (and my friends and family) is that they can get a sense of fulfilment from their lives. I have therefore found it much more helpful to develop and evaluate therapeutic interventions based on the personal meanings people hold in relation to their individual contexts and the ACT construct of workability, rather than based on psychometric measures.

3.3.3 What message am I giving?

A related struggle also came from what felt like a conflict with my clinical journey. As I entered my second year of doctoral training, I began thinking more critically in relation to clinical psychology and societal approaches to mental health, particularly when it comes to children and adolescents. An article which strongly resonates with

me opens with the line “*Children exist within a context that, for the most part, they are powerless to change*” (Gregory, 2017, para. 1). The author goes on to discuss how young people’s ‘symptoms’ are usually an understandable sign that something is not right in their world. The societal narrative that we need to ‘fix’ distressed children may be damaging when this supersedes a need to address the factors that are causing distress. As such, I began to struggle with the focus of my empirical project on emotional intelligence, and the premise that we need to identify factors that can help increase young people’s resilience. This implies that it is up to young people to take responsibility for change and coping with the stressors they are faced with, even though the situations they find themselves in are most likely not their fault. The British Psychological Society’s (2014) Code of Human Research Ethics discusses a need to acknowledge our social responsibility when undertaking research. It purports that we need to be alert to the possible consequences of the outcomes. I became concerned that my research could contribute to a narrative that blames young people for their difficulties, for example, it might be interpreted that they are struggling because they are simply not emotionally intelligent or resilient enough.

3.3.4 Despondency

I noticed myself becoming despondent through the data collection process. When I visited schools, I did not feel connected to the adolescents who were contributing to my research. At times I felt that my data represented little more than some circles on a questionnaire. This did not fit with the clinician and person in me that wants to ‘deep dive’ and really understand another person’s experience and nuanced perspectives on their wellbeing. At times, I even felt a sense of shame when telling people about my research topic, and I noticed myself becoming avoidant of it. Through the ACT lens, I could identify that I had become fused with the idea that I was engaging in heartless research because of my positivist stance and an implication that young people are to blame for their mental health difficulties. This clearly was not helping me to produce a piece of work that would pass the doctoral thesis’ requirements or be useful to the populations I wanted it to serve. It was also not doing justice to my participants who had given their time to contribute to my research and had been willing to answer personal questions, for example about their mental health. As such, I needed to approach these difficulties differently.

3.4 Exploration and sense-making

3.4.1 Two sides of the coin

ACT assumes that in pain, there is an opportunity to find meaning and purpose (Harris, 2009). My clinical supervisors at that time were both experienced ACT clinicians and would sometimes ask the question “what is the gift in these struggles?” This connects to a saying in ACT that has become somewhat of a mantra for me. ‘In your pain you find your values’ and vice versa – they are two sides of a coin. From this perspective, I could see that I was worried about my research because it is important to me to try and make things better for young people, grounded in my value of compassion. The thought that I might inadvertently cause harm was of course painful for me. I have also come to recognise how important it is to me to be open-minded and to engage my curiosity, which relates to my desire to understand both people’s individual experiences, and human nature more broadly. A final gift in these struggles was a reminder of how much I have learnt and developed my views and understandings since embarking on clinical psychologist training. This recognition enabled me to take a step back and think about my perspectives on the nature of knowing, as well as how I could make the most of the research direction I had chosen.

3.4.2 The nature of knowing: Flexible perspective taking

With regards to epistemology, I found that a position advocated by Bearman and Dawson (2013) resonated with me. In the context of systematic reviews, they suggest taking a pragmatic approach that acknowledges the different insights yielded from different methods rather than an “*all-or-nothing ‘false dualism’ of a qualitative-versus-quantitative dichotomy*” (p. 254). For me, knowledge is like an imperfect puzzle with multiple pieces. When we start to put the pieces together, we can get a fuller picture. A single piece is not so useful in isolation, and all pieces, provided they are of adequate quality, hold value. The whole puzzle is therefore more than the sum of its parts. I noticed that without really thinking about it, this is the approach I take to learning in my personal life. When different sources of information start to fit together and give a similar message, I assume I have the best understanding available to me at

a given time. Holding this view in mind, I could see that my study could hold value by contributing to a wider puzzle about young people's mental health. The adolescents who gave their time provided data that would enable me to tell their collective story through numbers, and it was my job to put this into the context of our existing knowledge. My clinical knowledge and research skills could help here.

I wonder if attending to epistemology can help us to understand how each piece of research fits (or does not fit) with a larger puzzle. However, it is most unhelpful for me personally to feel I need to be defined by an epistemological position, or to reduce the nature of knowing to any single stance. As Psychologists, I feel we can, and should, take a holistic perspective, understanding the value of different sources of knowledge as part of a collective whole. As such, when it came to my systematic literature review, it made sense to me to include studies using a range of methods, because here my aim was to start putting pieces of the puzzle together.

3.4.3 Values as a compass

I noticed that my struggle with the message behind my research would sometimes be temporarily alleviated following meetings with my research supervisors. I found it helpful when discussions touched upon the context that led me to choose this research topic. These discussions were helping me to connect with my values, in particular in compassion and an associated desire to alleviate suffering, and in being curious. A well-used metaphor in ACT is that values act as a compass that can guide us on our journeys in life. It dawned upon me that when I lost my connection with the values that inspired this research, I felt lost (just as I do on road journeys without my Google Maps' compass).

As I felt more connected with my values, I was able to use this to guide me through the data interpretation and writing processes. I was constantly holding in mind and wondering what my findings meant for young people's wellbeing and was connecting this with my clinical experience and knowledge, personal understandings and wider literature. I began to notice the same enthusiasm and excitement that I felt when I first chose my research topic. I also realised that another dichotomy I had been getting caught up in was whether we should be helping adolescents to develop personal

resources to help cope with stressors, versus targeting the contextual factors that are causing them stress. In reality, both of these are important for young people (and all of us) to thrive (Lerner, von Eye, Lerner, Lewin-Bizan & Bowers, 2010). Another premise of ACT is that life inevitably involves pain and suffering. I could see that we all need to develop personal resources to manage this, and that this need not be blaming or dismissive of context.

I particularly enjoyed writing the discussion sections of both of my research papers, where I was able to talk about the implications of my findings in real life contexts. I was able to consider how policy makers and school professionals can support young people, as well as how ACT may be able to improve parent and child wellbeing simultaneously. I felt able to integrate my different professional skills and identities as a researcher and clinician. I noticed feeling very driven to represent the data as well and usefully as I possibly could, and to distribute my findings to get this learning ‘out there’.

3.4.4 Self-awareness

Systematic reviews of empirical literature find that reflection can enhance self-awareness (Carmichael, 2018; Mann et al., 2009). As well as highlighting some of the values that drive me, reflecting on the thesis process has helped me to become more aware of some of my unhelpful patterns and habits.

3.4.4.1 Experiential Avoidance

Different methods of procrastination are commonly a source of humour and connection for students, and it is clearly a normal response when it comes to academic work. Nonetheless, I have found it helpful to be mindful of when I am more prone to procrastinating, and more specifically, to be aware of what I am avoiding. Unsurprisingly, I noticed that I was most likely to procrastinate at times when I was struggling. For example, when I needed to rethink my topic for my systematic literature review, I felt that I was going around in circles. This came at a time when I was very busy with placement and other assignments, and I felt that my work-life balance was suffering more than usual. It also came at a time of upsetting

circumstances in my personal life. I found that even when I set aside time to focus on my systematic review topic, I could not make progress with it. I kept busying myself with other jobs and therefore did not quite realise how much I was avoiding it. Crucially, I did not ask for help, or let anyone know that I was struggling.

I have come to realise that I often struggle with asking for help, perhaps being fused with ideas about what I should be able to do on my own. As such, I believe that I was in part avoiding having to face the fact that I was finding things difficult and needed help. Through the ACT lens, I was engaging in experiential avoidance by trying to get rid of, or suppress, my emotions and thoughts (Harris, 2009). I have often heard it said amongst colleagues that Psychologists can paradoxically ‘make the worst patients’ for this very reason. Drawing once again on the workability principle from ACT, it is clear that this was not moving me in the direction I wanted with my research. It is likely it may get in the way of me engaging in values-directed behaviours in other areas of my life too and is something that I would like to work on moving forward.

3.4.4.2 Trying to do it all

Another tendency that I have become aware of in myself over the course of training is attempting to take too much on. In the research context, this has shown up as me wanting to squeeze too much into my papers. In my empirical paper, I had initially hoped to look at the different domains of emotional intelligence in the relationships between stress and mental health difficulties. I was also keen to consider whether the various relationships differ according to age and gender. This, of course, completely overwhelmed me. Fortunately, my research supervisors and tutors supported me to keep things simple. For my systematic review, I had hoped to look at the impact of ACT interventions for parents on both parent and child mental health in addition to parenting and ACT processes. Again, I ended up completely overwhelming myself (and probably engaged in some avoidance behaviours for a while). This is a pattern that I recognise in my clinical placements and personal life too.

Once again, ACT came to my rescue. In the case of both papers, my desire to do more was routed in my values. I felt driven to produce interesting and useful research. I also felt that I had collected a lot of data and that I would be doing my participants a

disservice not to represent it fully. Despite these good intentions, my tendency to try and do everything meant that I was struggling to do anything. I was finding it hard to make sense of my data and to derive meaningful findings. This was not a workable approach for me. I noticed that when reading other papers, I found that the more the authors fit into one paper, the less I took from it because there was too much information to hold and make sense of. For my own research, I did not want to sacrifice depth for breadth, and did not want my readers to miss the key messages due to information overload. As such, I needed to accept the limits of what I could produce, and to let go of some of the extras I would like to have investigated. I hope that this enabled me to produce a better quality and more useful piece of work and is an experience I can learn from – sometimes simplicity is best.

3.5 ACT as a reflective tool: A gateway to personal and professional development

Research with Clinical Psychologists shows that the process of reflection can help to make sense of one's thoughts and feelings, thereby serving meaning-making and containing functions (Carmichael, 2018; Cushway & Gatherer, 2003b). I have found using ACT to facilitate this process has been hugely beneficial. The more I have learnt about ACT, the more I have come to see connecting with values as absolutely crucial to help derive meaning from our struggles. This can facilitate acceptance of ourselves and our pain, motivate us, and ultimately enable us to get fulfilment from our endeavours. I have also found that the use of metaphor in ACT is well suited to the reflective process. Perry and Cooper (2001) suggest that metaphor allows us to explore our professional lives from diverse perspectives over time and thus encourages ongoing and purposeful reflection.

I have been surprised at how much I was able to learn from reflecting on the research process, and how this generalises to other areas of my life. Woodward et al. (2015) found that newly qualified psychologists identified how their personal and professional identities were closely related. The authors suggest that holding a stable and accepting sense of self may benefit Psychologists' professional development and general wellbeing. I feel that the self-as-context (also known as the observing self) concept in ACT is beneficial here. The observing self is seen as a space from which we can observe our experiences. This part of our selves is always present and stable

like the sky, whereas our thoughts, feelings, and many parts of our identity can be seen to come and go like the weather. Connecting with this idea has helped me to take a step back from conflicts between the different parts of my personal and professional identities. I can see how all these parts hold value and can complement one another. I feel truly privileged to be on a career path that enables me to take the role of a scientist, practitioner and reflector, often simultaneously.

Lavender (2003) discusses the distinction between ‘reflecting in action’ and ‘reflecting on action’ (a distinction originally made by Schön, 1983). I have found ACT can facilitate both of these processes. The mindfulness and acceptance processes have supported me to reflect cognitively and emotionally about what I am doing and what I should do next (reflection in action). This has prompted me to make changes in order to get the most out of my research experiences. In the process of writing this paper, I have been able to use ACT to ‘reflect on action’ by revisiting my experiences and making sense of them through this lens. The learning from this process has inspired me to identify some actions that I would like to commit to, which I will outline as a conclusion to these reflections.

3.6 Conclusion and committed actions

Lavender (2003) discusses the importance of self-reflection for Psychologists, because we all hold vulnerabilities which will show up in different contexts. We should be willing to explore these, as we ask the people we work with to. This reflective process has shown me that self-reflection is also about recognising our strengths, values and motivators. This approach has enabled me not only to ‘survive’ the thesis process, but to enjoy many aspects of it. I hope it will enable me to thrive as a clinician and practice-based researcher moving forward.

3.6.1 Committed actions

As is implicit in its name and acronym, the acceptance and commitment therapy (ACT) model upon which these reflections are based is about committing to and taking action. Based on my reflections, I would like to commit to the following actions:

1. To make every effort to publish the findings of my research.

2. To take (or make) opportunities to combine my research and clinical skills and knowledge in order to undertake meaningful practice-based research.
3. To continue using ACT as a model for my personal and professional reflections, and in particular to use this to guide me in finding my work-life balance and voice as a Clinical Psychologist upon qualification.
4. More broadly, to approach the things I do with curiosity, open-mindedness and compassion, both towards myself and others.

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Appendices

Note: Some documents, e.g. questionnaires, reformatted due to margin requirements for the doctoral thesis

Appendix A: Author instructions for submission to the Journal of Contextual Behavioral Science

Guide for Authors

Types of article

All manuscripts must clearly and explicitly be of relevance to CBS. You may find the JCBS article "Contextual Behavioral Science: creating a science more adequate to the challenge of the human condition" helpful in assessing whether your manuscript is likely to be of interest to readers of this journal.

Articles should fall into one of seven categories:

1. Empirical research (up to 6000 words)
2. Brief empirical reports (up to 3000 words)
3. Review articles (up to 10,000 words)
4. Conceptual articles (up to 6000 words)
5. In practice (up to 3000 words)
6. Practical innovations (up to 3000 words)
7. Professional interest briefs (up to 3000 words)

Word limits exclude references, tables and figures but include the abstract

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- Ensure all figure and table citations in the text match the files provided
- Indicate clearly if color should be used for any figures in print *Graphical Abstracts* / *Highlights files* (where applicable)
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Further considerations

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Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors can build footnotes into the text, and this feature may be used. Otherwise, please indicate the position of footnotes in the text and list the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

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Electronic artwork

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- Make sure you use uniform lettering and sizing of your original artwork.
- Embed the used fonts if the application provides that option.
- Aim to use the following fonts in your illustrations: Arial, Courier, Times New Roman, Symbol, or use fonts that look similar.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Provide captions to illustrations separately.
- Size the illustrations close to the desired dimensions of the published version.
- Submit each illustration as a separate file.

A detailed guide on electronic artwork is available.

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References

Citation in text

Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

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As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

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This journal encourages you to cite underlying or relevant datasets in your manuscript by citing them in your text and including a data reference in your Reference List. Data references should include the following elements: author name(s), dataset title, data repository, version (where available), year, and global persistent identifier. Add [dataset] immediately before the reference so we can properly identify it as a data reference. The [dataset] identifier will not appear in your published article.

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Please ensure that the words 'this issue' are added to any references in the list (and any citations in the text) to other articles in the same Special Issue.

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List: references should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters 'a', 'b', 'c', etc., placed after the year of publication.

Examples:

- Reference to a journal publication:

Van der Geer, J., Hanraads, J. A. J., & Lupton, R. A. (2010). The art of writing a scientific article. *Journal of Scientific Communications*, 163, 51–59.

<https://doi.org/10.1016/j.Sc.2010.00372>.

- Reference to a journal publication with an article number:

Van der Geer, J., Hanraads, J. A. J., & Lupton, R. A. (2018). The art of writing a scientific article. *Heliyon*, 19, e00205.

<https://doi.org/10.1016/j.heliyon.2018.e00205>.

- Reference to a book:

Strunk, W., Jr., & White, E. B. (2000). *The elements of style*. (4th ed.). New York:

Longman, (Chapter 4).

- Reference to a chapter in an edited book:

Mettam, G. R., & Adams, L. B. (2009). How to prepare an electronic version of your article. In B. S. Jones, & R. Z. Smith (Eds.), *Introduction to the electronic age* (pp. 281–304). New York: E-Publishing Inc.

- Reference to a website:

Cancer Research UK. Cancer statistics reports for the UK. (2003).

<http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/> Accessed 13 March 2003.

- Reference to a dataset:

[dataset] Oguro, M., Imahiro, S., Saito, S., Nakashizuka, T. (2015). *Mortality data for Japanese oak wilt disease and surrounding forest compositions*. Mendeley Data, v1. <https://doi.org/10.17632/xwj98nb39r.1>.

- Reference to a conference paper or poster presentation:

Engle, E.K., Cash, T.F., & Jarry, J.L. (2009, November). The Body Image Behaviours Inventory-3: Development and validation of the Body Image Compulsive Actions and Body Image Avoidance Scales. Poster session presentation at the meeting of the Association for Behavioural and Cognitive Therapies, New York, NY.

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descriptive caption for each supplementary file. If you wish to make changes to supplementary material during any stage of the process, please make sure to provide an updated file. Do not annotate any corrections on a previous version. Please switch off the 'Track Changes' option in Microsoft Office files as these will appear in the published version.

After Acceptance

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Appendix B: Database search strategies and results

The following synonyms were used for the main search concepts of “Acceptance and Commitment Therapy” and “Parents”: Acceptance-Based; Parent*; family; mother; father; carer*; guardian. Article titles, abstracts and key words were searched via databases using a Boolean configuration: Acceptance and commitment therapy OR Acceptance-Based AND Parent* OR family OR mother OR father OR carer* OR guardian.

PsycINFO – 253 papers identified, 04/12/2018

Database: PsycINFO <1806 to November Week 4 2018>

Search Strategy:

-
- 1 (Acceptance and commitment therapy).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (2042)
 - 2 (ACCEPTANCE BASED or ACCEPTANCE-BASED).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (624)
 - 3 exp "Acceptance and Commitment Therapy"/ (1512)
 - 4 PARENT*.mp. or exp PARENT TRAINING/ (275758)
 - 5 family.mp. or exp FAMILY/ (319884)
 - 6 MOTHER*.mp. (126089)
 - 7 FATHER*.mp. (46939)
 - 8 exp Caregivers/ or CARER*.mp. (32361)
 - 9 exp Guardianship/ or GUARDIAN.mp. (1752)
 - 10 1 or 2 or 3 (2441)
 - 11 4 or 5 or 6 or 7 or 8 or 9 (586494)
 - 12 10 and 11 (**253**)

MEDLINE – 72 papers identified, 08/12/2018

Database: Ovid MEDLINE(R) <1946 to November Week 5 2018>

Search Strategy:

-
- 1 (Acceptance and commitment therapy).mp. (526)
 - 2 exp "Acceptance and Commitment Therapy"/ (250)
 - 3 (ACCEPTANCE BASED or ACCEPTANCE-BASED).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (227)
 - 4 exp SINGLE PARENT/ or Parent*.mp. or exp PARENT-CHILD RELATIONS/ (411055)
 - 5 family.mp. or exp FAMILY/ (1009245)
 - 6 father*.mp. or exp Fathers/ (38015)
 - 7 mother*.mp. or exp Mothers/ (195296)
 - 8 exp Caregivers/ or carer*.mp. (37960)
 - 9 exp Parents/ or exp LEGAL GUARDIANS/ or guardian.mp. (105047)
 - 10 1 or 2 or 3 (701)

- 11 4 or 5 or 6 or 7 or 8 or 9 (1390351)
- 12 10 and 11 (72)

Database: CINAHL, 71 papers identified 04/12/18

Search Strategy:

-
1. AB "acceptance and commitment therapy" (384)
 2. (MH "Acceptance and Commitment Therapy") (275)
 3. AB "acceptance based" OR acceptance-based (128)
 4. (MH "Parents+") OR (MH "Fathers+") OR (MH "Mothers+") OR (MH "Family+") (189,553)
 5. AB parent* (90,778)
 6. AB family (157,815)
 7. AB mother* (53,241)
 8. AB father* (10,646)
 9. AB carer* (9,918)
 10. (MH "Guardianship, Legal+") OR "guardian" (2,300)
 11. S1 OR S2 OR S3 (605)
 12. S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10 (368,741)
 13. S11 AND S12 (71)

Database: Scopus, 197 papers identified 08/12/2018

Search Strategy:

-
1. TITLE-ABS-KEY ("Acceptance and commitment therapy") (1,693)
 2. TITLE-ABS-KEY (acceptance-based) (614)
 3. TITLE-ABS-KEY ("Acceptance based") (614)
 4. TITLE-ABS-KEY (parent*) (760,259)
 5. TITLE-ABS-KEY (family) (1,742,198)
 6. TITLE-ABS-KEY (mother*) (338,013)
 7. TITLE-ABS-KEY (father*) (83,509)
 8. TITLE-ABS-KEY (carer*) (19,877)
 9. TITLE-ABS-KEY (guardian) (13,690)
 10. (TITLE-ABS-KEY ("Acceptance and commitment therapy")) OR (TITLE-ABS-KEY (acceptance-based)) OR (TITLE-ABS-KEY ("Acceptance based")) (2,181)
 11. (TITLE-ABS-KEY (parent*)) OR (TITLE-ABS-KEY (family)) OR (TITLE-ABS-KEY (mother)) OR (TITLE-ABS-KEY (father)) OR (TITLE-ABS-KEY (carer*)) OR (TITLE-ABS-KEY (guardian)) (2,618,502)
 12. ((TITLE-ABS-KEY ("Acceptance and commitment therapy")) OR (TITLE-ABS-KEY (acceptance-based)) OR (TITLE-ABS-KEY ("Acceptance based"))) AND ((TITLE-ABS-KEY (parent*)) OR (TITLE-ABS-KEY (family)) OR (TITLE-ABS-KEY (mother)) OR (TITLE-ABS-KEY (father)) OR (TITLE-ABS-KEY (carer*)) OR (TITLE-ABS-KEY (guardian))) (198)

Cochrane library – 23 papers identified, 04/12/2018

Search Strategy:

-
- 1 MeSH descriptor: [Acceptance and Commitment Therapy] explode all trees (111)
 - 2 Acceptance-based OR “acceptance based” (145)
 - 3 Parent* (32454)
 - 4 MeSH descriptor: [Parenting] explode all trees (1073)
 - 5 family (29590)
 - 6 MeSH descriptor: [Family] explode all trees (8111)
 - 7 Mother (8201)
 - 8 MeSH descriptor: [Mothers] explode all trees 1509
 - 9 Father (686)
 - 10 MeSH descriptor: [Fathers] explode all trees (153)
 - 11 carer* (3573)
 - 12 MeSH descriptor: [Caregivers] explode all trees (1800)
 - 13 guardian (617)
 - 14 MeSH descriptor: [Legal Guardians] explode all trees (69)
 - 15 #1 OR #2 (237)
 - 16 #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 (66600)
 - 17 #15 AND #16 **23** (4 Cochrane reviews, 1 Cochrane protocol, 18 trials)

Appendix C: Crowe Critical Appraisal Tool (CCAT)

Crowe Critical Appraisal Tool (CCAT) Form (v1.4)

Reference

Reviewer

This form must be used in conjunction with the CCAT User Guide (v1.4); otherwise validity and reliability may be severely compromised.

Citation	
	Year

Research design (add if not listed)	
<input type="checkbox"/> Not research	Article Editorial Report Opinion Guideline Pamphlet ...
<input type="checkbox"/> Historical	...
<input type="checkbox"/> Qualitative	Narrative Phenomenology Ethnography Grounded theory Narrative case study ...
<input type="checkbox"/> Descriptive, Exploratory, Observational	A. Cross-sectional Longitudinal Retrospective Prospective Correlational Predictive ... B. Cohort Case-control Survey Developmental Normative Case study ...
<input type="checkbox"/> Experimental	<input type="checkbox"/> True experiment Pre-test/post-test control group Solomon four-group Post-test only control group Randomised two-factor Placebo controlled trial ... <input type="checkbox"/> Quasi-experiment Post-test only Non-equivalent control group Counter balanced (<i>cross-over</i>) Multiple time series Separate sample pre-test post-test [no Control] [Control] ... <input type="checkbox"/> Single system One-shot experimental (<i>case study</i>) Simple time series One group pre-test/post-test Interactive Multiple baseline Within subjects (<i>Equivalent time, repeated measures, multiple treatment</i>) ...
<input type="checkbox"/> Mixed Methods	Action research Sequential Concurrent Transformative ...
<input type="checkbox"/> Synthesis	Systematic review Critical review Thematic synthesis Meta-ethnography Narrative synthesis ...
<input type="checkbox"/> Other	...

Variables and analysis		
Intervention(s), Treatment(s), Exposure(s)	Outcome(s), Output(s), Predictor(s), Measure(s)	Data analysis method(s)

Sampling						
Total size	Group 1	Group 2	Group 3	Group 4	Control	
Population, sample, setting						

Data collection (add if not listed)	
Audit/Review	a) Primary Secondary ... b) Authoritative Partisan Antagonist ... c) Literature Systematic ...
Observation	a) Participant Non-participant ... b) Structured Semi-structured Unstructured ... c) Covert Candid ...

Scores							
Preliminaries		Design		Data Collection		Results	
Introduction		Sampling		Ethical Matters		Discussion	

General notes



Crowe Critical Appraisal Tool (CCAT) :: Version 1.4 (19 November 2013) :: Michael Crowe (michael.crowe@my.jcu.edu.au)

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Page 1 of 2

Appraise research on the merits of the research design used, not against other research designs.

Category Item	Item descriptors [<input checked="" type="checkbox"/> Present; <input type="checkbox"/> Absent; <input type="checkbox"/> Not applicable]	Description [Important information for each item]	Score [0–5]
1. Preliminaries			
Title	1. Includes study aims <input type="checkbox"/> and design <input type="checkbox"/>		
Abstract (assess last)	1. Key information <input type="checkbox"/> 2. Balanced <input type="checkbox"/> and informative <input type="checkbox"/>		
Text (assess last)	1. Sufficient detail others could reproduce <input type="checkbox"/> 2. Clear/concise writing <input type="checkbox"/> ; table(s) <input type="checkbox"/> ; diagram(s) <input type="checkbox"/> ; figure(s) <input type="checkbox"/>		
Preliminaries [/5]			
2. Introduction			
Background	1. Summary of current knowledge <input type="checkbox"/> 2. Specific problem(s) addressed <input type="checkbox"/> and reason(s) for addressing <input type="checkbox"/>		
Objective	1. Primary objective(s), hypothesis(es), or aim(s) <input type="checkbox"/> 2. Secondary question(s) <input type="checkbox"/>		
Is it worth continuing?			Introduction [/5]
3. Design			
Research design	1. Research design(s) chosen <input type="checkbox"/> and why <input type="checkbox"/> 2. Suitability of research design(s) <input type="checkbox"/>		
Intervention, Treatment, Exposure	1. Intervention(s)/treatment(s)/exposure(s) chosen <input type="checkbox"/> and why <input type="checkbox"/> 2. Precise details of the intervention(s)/treatment(s)/exposure(s) <input type="checkbox"/> for each group <input type="checkbox"/> 3. Intervention(s)/treatment(s)/exposure(s) valid <input type="checkbox"/> and reliable <input type="checkbox"/>		
Outcome, Output, Predictor, Measure	1. Outcome(s)/output(s)/predictor(s)/measure(s) chosen <input type="checkbox"/> and why <input type="checkbox"/> 2. Clearly define outcome(s)/output(s)/predictor(s)/measure(s) <input type="checkbox"/> 3. Outcome(s)/output(s)/predictor(s)/measure(s) valid <input type="checkbox"/> and reliable <input type="checkbox"/>		
Bias, etc	1. Potential bias <input type="checkbox"/> ; confounding variables <input type="checkbox"/> ; effect modifiers <input type="checkbox"/> ; interactions <input type="checkbox"/> 2. Sequence generation <input type="checkbox"/> ; group allocation <input type="checkbox"/> ; group balance <input type="checkbox"/> ; and by whom <input type="checkbox"/> 3. Equivalent treatment of participants/cases/groups <input type="checkbox"/>		
Is it worth continuing?			Design [/5]
4. Sampling			
Sampling method	1. Sampling method(s) chosen <input type="checkbox"/> and why <input type="checkbox"/> 2. Suitability of sampling method <input type="checkbox"/>		
Sample size	1. Sample size <input type="checkbox"/> ; how chosen <input type="checkbox"/> ; and why <input type="checkbox"/> 2. Suitability of sample size <input type="checkbox"/>		
Sampling protocol	1. Target/actual/sample population(s): description <input type="checkbox"/> and suitability <input type="checkbox"/> 2. Participants/cases/groups: inclusion <input type="checkbox"/> and exclusion <input type="checkbox"/> criteria 3. Recruitment of participants/cases/groups <input type="checkbox"/>		
Is it worth continuing?			Sampling [/5]
5. Data collection			
Collection method	1. Collection method(s) chosen <input type="checkbox"/> and why <input type="checkbox"/> 2. Suitability of collection method(s) <input type="checkbox"/>		
Collection protocol	1. Include date(s) <input type="checkbox"/> ; location(s) <input type="checkbox"/> ; setting(s) <input type="checkbox"/> ; personnel <input type="checkbox"/> ; materials <input type="checkbox"/> ; processes <input type="checkbox"/> 2. Method(s) to ensure/enhance quality of measurement/instrumentation <input type="checkbox"/> 3. Manage non-participation <input type="checkbox"/> ; withdrawal <input type="checkbox"/> ; incomplete/lost data <input type="checkbox"/>		
Is it worth continuing?			Data collection [/5]
6. Ethical matters			
Participant ethics	1. Informed consent <input type="checkbox"/> ; equity <input type="checkbox"/> 2. Privacy <input type="checkbox"/> ; confidentiality/anonymity <input type="checkbox"/>		
Researcher ethics	1. Ethical approval <input type="checkbox"/> ; funding <input type="checkbox"/> ; conflict(s) of interest <input type="checkbox"/> 2. Subjectivities <input type="checkbox"/> ; relationship(s) with participants/cases <input type="checkbox"/>		
Is it worth continuing?			Ethical matters [/5]
7. Results			
Analysis, Integration, Interpretation method	1. A.I.I. method(s) for primary outcome(s)/output(s)/predictor(s) chosen <input type="checkbox"/> and why <input type="checkbox"/> 2. Additional A.I.I. methods (e.g. subgroup analysis) chosen <input type="checkbox"/> and why <input type="checkbox"/> 3. Suitability of analysis/integration/interpretation method(s) <input type="checkbox"/>		
Essential analysis	1. Flow of participants/cases/groups through each stage of research <input type="checkbox"/> 2. Demographic and other characteristics of participants/cases/groups <input type="checkbox"/> 3. Analyse raw data <input type="checkbox"/> ; response rate <input type="checkbox"/> ; non-participation/withdrawal/incomplete/lost data <input type="checkbox"/>		
Outcome, Output, Predictor analysis	1. Summary of results <input type="checkbox"/> and precision <input type="checkbox"/> for each outcome/output/predictor/measure 2. Consideration of benefits/harms <input type="checkbox"/> ; unexpected results <input type="checkbox"/> ; problems/failures <input type="checkbox"/> 3. Description of outlying data (e.g. diverse cases, adverse effects, minor themes) <input type="checkbox"/>		
Results [/5]			
8. Discussion			
Interpretation	1. Interpretation of results in the context of current evidence <input type="checkbox"/> and objectives <input type="checkbox"/> 2. Draw inferences consistent with the strength of the data <input type="checkbox"/> 3. Consideration of alternative explanations for observed results <input type="checkbox"/> 4. Account for bias <input type="checkbox"/> ; confounding/effect modifiers/interactions/imprecision <input type="checkbox"/>		
Generalisation	1. Consideration of overall practical usefulness of the study <input type="checkbox"/> 2. Description of generalisability (external validity) of the study <input type="checkbox"/>		
Concluding remarks	1. Highlight study's particular strengths <input type="checkbox"/> 2. Suggest steps that may improve future results (e.g. limitations) <input type="checkbox"/> 3. Suggest further studies <input type="checkbox"/>		
Discussion [/5]			
9. Total			
Total score	1. Add all scores for categories 1–8		
Total [/40]			

Appendix D: Quality assessment interrater reliability checks

Category	Casselman & Pemberton (2015)		Chong, Mak, Leung, Lam & Loke (2019)		Gould, Tarbox & Coyne (2018)		Hahs, Dixon & Paliliunas (2018)		Joekear, Farid, Birashk, Gharraee & Mohammadian (2016)		Moyer, Page, McMakin, Murrell, Lester & Walker (2018)		Wallace, Woodford & Connelly (2016)		Whittingham, Sanders, McKinlay & Boyd (2014)	
	Rater 1 score	Rater 2 score	Rater 1 score	Rater 2 score	Rater 1 score	Rater 2 score	Rater 1 score	Rater 2 score	Rater 1 score	Rater 2 score	Rater 1 score	Rater 2 score	Rater 1 score	Rater 2 score	Rater 1 score	Rater 2 score
Preliminaries	3	3	5	5	4	4	4	4	3	3	4	4	4	4	5	5
Introduction	4	4	4	3	4	5	4	4	3	3	4	5	5	5	5	5
Design	3	3	4	4	4	4	4	4	3	4	4	4	4	4	4	5
Sample	3	2	4	5	2	3	2	3	4	4	4	3	4	3	5	5
Data collection	2	3	3	4	3	2	4	4	3	3	4	4	5	4	3	3
Ethics	0	0	4	4	0	0	3	3	3	3	4	4	2	1	4	4
Results	3	3	4	5	3	3	4	3	3	3	5	5	4	5	4	5
Discussion	5	4	5	4	5	5	3	3	3	3	4	5	5	4	4	4
Total score	23	22	33	35	26	26	28	28	25	27	33	34	33	31	34	36
Percentage	58	55	83	88	65	65	70	70	63	68	83	85	83	78	85	90

Appendix E: List of questionnaires reported on in the systematic review

Parenting measures

Alabama parenting questionnaire (APQ)
Adult responses to children's symptoms (ARCS)
Cerebral Palsy Daily Parenting Tasks Checklist (CP-DPTC)
Kansas Parental Satisfaction Scale (KPS)
Parent Asthma Management Self-Efficacy Scale (PAMSES)
Parental Acceptance-Rejection/ control Questionnaire: Child short form (PARQ/
control-CSF)
Parental Locus of Control Scale (PLOC)
Parenting Stress Index-Short Form (PSI-SF)
Parenting Stress Index-Short Form (PSI-SF)
Parental psychological flexibility questionnaire (PPFQ)
Parent psychological flexibility questionnaire (PPFQ-pain)

ACT process measures

Acceptance and Action Questionnaire (AAQ)
Automatic thoughts questionnaire (ATQ)
Cognitive Fusion Questionnaire (CFQ)
Frieberg Mindfulness Inventory (FMI)
Internalised Shame Scale (ISS)
Mindful Attention and Awareness Scale (MAAS)
Personal Values Questionnaire-II (PVQ-II)
Valued living questionnaire (VPQ)
The White Bear Suppression Inventory (WBSI)

Appendix F: Author instructions for submission to Frontiers in Psychology

BJP Author Guidelines

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1. Submission

Authors should kindly note that submission implies that the content has not been published or submitted for publication elsewhere except as a brief abstract in the proceedings of a scientific meeting or symposium.

Once the submission materials have been prepared in accordance with the Author Guidelines, manuscripts should be submitted online at

<http://www.editorialmanager.com/bjp>

Click here for more details on how to use **Editorial Manager**.

All papers published in the *British Journal of Psychology* are eligible for Panel A: Psychology, Psychiatry and Neuroscience in the Research Excellence Framework (REF).

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Authors may also post the submitted version of a manuscript to non-commercial servers at any time. Authors are requested to update any pre-publication versions with a link to the final published article.

2. Aims and Scope

The *British Journal of Psychology* publishes original research on all aspects of general psychology including cognition; health and clinical psychology; developmental, social and occupational psychology. For information on specific requirements, please view [**Author Guidelines**](#).

We attract a large number of international submissions each year which make major contributions across the range of psychology, particularly where the work has the following characteristics:

- articles or groups of articles dealing with topics which are of interest to researchers from more than one specialism;
- section of psychology or which address topics or issues at the interface between different specialisms or sections of psychology;
- articles or groups of articles which take different or contrasting methodological or theoretical approaches to a single topic;
- articles or groups of articles dealing with novel areas, theories or methodologies;
- integrative reviews, particularly where the review offers new analysis (e.g. meta-analysis), new theory or new implications for practice;
- articles or groups of articles dealing with the history of psychology;
- interdisciplinary work, where the contribution from, or to, psychological theory or practice is clear.

It enjoys a wide international readership and features reports of empirical studies, critical reviews of the literature and theoretical contributions which aim to further our understanding of psychology.

The journal additionally publishes a small number of invited articles by people who lead their field on a topic that provokes discussion. These articles include a short peer commentary.

3. Manuscript categories and requirements

All papers should be no more than 8000 words (excluding the abstract, reference list, tables and figures). In exceptional cases the Editor retains discretion to publish papers beyond this length where the clear and concise expression of the scientific content requires greater length (e.g., explanation of a new theory or a substantially new method). Authors must contact the Editor prior to submission in such a case.

Please refer to the separate guidelines for [**Registered Reports**](#).

All systematic reviews must be pre-registered.

4. Preparing the submission

Contributions must be typed in double spacing. All sheets must be numbered.

Cover Letters

Cover letters are not mandatory; however, they may be supplied at the author's discretion. They should be pasted into the 'Comments' box in Editorial Manager.

Parts of the Manuscript

The manuscript should be submitted in separate files: title page; main text file; figures/tables; supporting information.

Title Page

You may like to use **this template** for your title page. The title page should contain:
A short informative title containing the major key words. The title should not contain abbreviations (see Wiley's best practice SEO tips);

A short running title of less than 40 characters;

The full names of the authors;

The author's institutional affiliations where the work was conducted, with a footnote for the author's present address if different from where the work was conducted;

Abstract;

Keywords;

Acknowledgments.

Authorship

Please refer to the journal's Authorship policy in the Editorial Policies and Ethical Considerations section for details on author listing eligibility. When entering the author names into Editorial Manager, the corresponding author will be asked to provide a CRediT contributor role to classify the role that each author played in creating the manuscript. Please see the **Project CRediT** website for a list of roles.

Abstract

Please provide an abstract of between 100 and 200 words, giving a concise statement of the intention, results or conclusions of the article. The abstract should not include any sub-headings.

Keywords

Please provide appropriate keywords.

Acknowledgments

Contributions from anyone who does not meet the criteria for authorship should be listed, with permission from the contributor, in an Acknowledgments section.

Financial and material support should also be mentioned. Thanks to anonymous reviewers are not appropriate.

Main Text File

As papers are double-blind peer reviewed, the main text file should not include any information that might identify the authors.

The main text file should be presented in the following order:

- Title
- Main text
- References
- Tables and figures (each complete with title and footnotes)
- Appendices (if relevant)

Supporting information should be supplied as separate files.

Tables and figures can be included at the end of the main document or attached as separate files but they must be mentioned in the text.

As papers are double-blind peer reviewed, the main text file should not include any information that might identify the authors. Please do not mention the authors' names or affiliations and always refer to any previous work in the third person.

The journal uses British/US spelling; however, authors may submit using either option, as spelling of accepted papers is converted during the production process.

References

References should be prepared according to the *Publication Manual of the American Psychological Association* (6th edition). This means in text citations should follow the author-date method whereby the author's last name and the year of publication for the source should appear in the text, for example, (Jones, 1998). The complete reference list should appear alphabetically by name at the end of the paper. Please note that for journal articles, issue numbers are not included unless each issue in the volume begins with page 1, and a DOI should be provided for all references where available.

For more information about APA referencing style, please refer to the **[APA FAQ](#)**.

Reference examples follow:

• *Journal article*

Beers, S. R. , & De Bellis, M. D. (2002). Neuropsychological function in children with maltreatment-related posttraumatic stress disorder. *The American Journal of Psychiatry*, 159, 483–486. doi:**10.1176/appi.ajp.159.3.483**

• *Book*

Bradley-Johnson, S. (1994). *Psychoeducational assessment of students who are visually impaired or blind: Infancy through high school* (2nd ed.). Austin, TX: Pro-ed.

• *Internet Document*

Norton, R. (2006, November 4). How to train a cat to operate a light switch [Video file]. Retrieved from **<http://www.youtube.com/watch?v=Vja83KLQXZs>**

Tables

Tables should be self-contained and complement, not duplicate, information contained in the text. They should be supplied as editable files, not pasted as images. Legends should be concise but comprehensive – the table, legend, and footnotes must be understandable without reference to the text. All abbreviations must be defined in footnotes. Footnote symbols: †, ‡, §, ¶, should be used (in that order) and *, **, *** should be reserved for P-values. Statistical measures such as SD or SEM should be identified in the headings.

Figures

Although authors are encouraged to send the highest-quality figures possible, for peer-review purposes, a wide variety of formats, sizes, and resolutions are accepted.

Click here for the basic figure requirements for figures submitted with manuscripts for initial peer review, as well as the more detailed post-acceptance figure requirements. Legends should be concise but comprehensive – the figure and its legend must be understandable without reference to the text. Include definitions of any symbols used and define/explain all abbreviations and units of measurement.

Colour figures. Figures submitted in colour may be reproduced in colour online free of charge. Please note, however, that it is preferable that line figures (e.g. graphs and charts) are supplied in black and white so that they are legible if printed by a reader in black and white. If an author would prefer to have figures printed in colour in hard copies of the journal, a fee will be charged by the Publisher.

Supporting Information

Supporting information is information that is not essential to the article, but provides greater depth and background. It is hosted online and appears without editing or typesetting. It may include tables, figures, videos, datasets, etc.

Click here for Wiley's FAQs on supporting information.

Note: if data, scripts, or other artefacts used to generate the analyses presented in the paper are available via a publicly available data repository, authors should include a reference to the location of the material within their paper.

General Style Points

For guidelines on editorial style, please consult the **APA Publication Manual** published by the American Psychological Association. The following points provide general advice on formatting and style.

Language: Authors must avoid the use of sexist or any other discriminatory language.

Abbreviations: In general, terms should not be abbreviated unless they are used repeatedly and the abbreviation is helpful to the reader. Initially, use the word in full, followed by the abbreviation in parentheses. Thereafter use the abbreviation only.

Units of measurement: Measurements should be given in SI or SI-derived units. Visit the [Bureau International des Poids et Mesures \(BIPM\) website](#) for more information about SI units.

Effect size: In normal circumstances, effect size should be incorporated.

Numbers: numbers under 10 are spelt out, except for: measurements with a unit (8mmol/l); age (6 weeks old), or lists with other numbers (11 dogs, 9 cats, 4 gerbils).

Wiley Author Resources

Manuscript Preparation Tips: Wiley has a range of resources for authors preparing manuscripts for submission available [here](#). In particular, we encourage authors to consult Wiley's best practice tips on [Writing for Search Engine Optimization](#).

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5. Editorial policies and ethical considerations

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Except where otherwise stated, the journal operates a policy of anonymous (double blind) peer review. Please ensure that any information which may reveal author identity is blinded in your submission, such as institutional affiliations, geographical location or references to unpublished research. We also operate a triage process in which submissions that are out of scope or otherwise inappropriate will be rejected by the editors without external peer review. The [qualitative guidelines](#) explain how the quality of research papers using qualitative methods will be judged. Before submitting, please read [the terms and conditions of submission](#) and the [declaration of competing interests](#).

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Further information about the process of peer review and production can be found in '[What happens to my paper?](#)' Appeals are handled according to the [procedure recommended by COPE](#). Wiley's policy on the confidentiality of the review process is [available here](#).

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Accurate and complete reporting enables readers to fully appraise research, replicate it, and use it. Authors are encouraged to adhere to recognised research reporting standards.

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[The Gold Standard Publication Checklist from Hooijmans and colleagues](#)

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Conflict of Interest

The journal requires that all authors disclose any potential sources of conflict of interest. Any interest or relationship, financial or otherwise that might be perceived as influencing an author's objectivity is considered a potential source of conflict of interest. These must be disclosed when directly relevant or directly related to the work that the authors describe in their manuscript. Potential sources of conflict of interest include, but are not limited to: patent or stock ownership, membership of a company board of directors, membership of an advisory board or committee for a company, and consultancy for or receipt of speaker's fees from a company. The existence of a conflict of interest does not preclude publication. If the authors have no conflict of interest to declare, they must also state this at submission. It is the responsibility of the corresponding author to review this policy with all authors and collectively to disclose with the submission ALL pertinent commercial and other relationships.

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Authorship

All listed authors should have contributed to the manuscript substantially and have agreed to the final submitted version. Authorship is defined by the criteria set out in the APA Publication Manual:

“Individuals should only take authorship credit for work they have actually performed or to which they have substantially contributed (APA Ethics Code Standard 8.12a, Publication Credit). Authorship encompasses, therefore, not only those who do the actual writing but also those who have made substantial scientific contributions to a study. Substantial professional contributions may include formulating the problem or hypothesis, structuring the experimental design, organizing and conducting the statistical analysis, interpreting the results, or writing a major portion of the paper. Those who so contribute are listed in the byline.” (p.18)

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The *British Journal of Psychology* recognizes the many benefits of archiving data for scientific progress. Archived data provides an indispensable resource for the scientific community, making possible future replications and secondary analyses, in addition to the importance of verifying the dependability of published research findings.

The journal expects that where possible all data supporting the results in papers published are archived in an appropriate public archive offering open access and guaranteed preservation. The archived data must allow each result in the published paper to be recreated and the analyses reported in the paper to be replicated in full to support the conclusions made. Authors are welcome to archive more than this, but not

less.

All papers need to be supported by a data archiving statement and the data set must be cited in the Methods section. The paper must include a link to the repository in order that the statement can be published.

It is not necessary to make data publicly available at the point of submission, but an active link must be included in the final accepted manuscript. For authors who have pre-registered studies, please use the Registered Report link in the Author Guidelines.

In some cases, despite the authors' best efforts, some or all data or materials cannot be shared for legal or ethical reasons, including issues of author consent, third party rights, institutional or national regulations or laws, or the nature of data gathered. In such cases, authors must inform the editors at the time of submission. It is understood that in some cases access will be provided under restrictions to protect confidential or proprietary information. Editors may grant exceptions to data access requirements provided authors explain the restrictions on the data set and how they preclude public access, and, if possible, describe the steps others should follow to gain access to the data.

If the authors cannot or do not intend to make the data publicly available, a statement to this effect, along with the reasons that the data is not shared, must be included in the manuscript.

Finally, if submitting authors have any questions about the data sharing policy, please access the [FAQs](#) for additional detail.

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As part of the journal's commitment to supporting authors at every step of the publishing process, the journal requires the submitting author (only) to provide an ORCID iD when submitting a manuscript. This takes around 2 minutes to complete. [Find more information here.](#)

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7. Publication process after acceptance

Accepted Article Received in Production

When an accepted article is received by Wiley's production team, the corresponding author will receive an email asking them to login or register with **[Wiley Author Services](#)**. The author will be asked to sign a publication license at this point.

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Once the paper is typeset, the author will receive an email notification with full instructions on how to provide proof corrections.

Please note that the author is responsible for all statements made in their work, including changes made during the editorial process – authors should check proofs carefully. Note that proofs should be returned within 48 hours from receipt of first proof.

Publication Charges

Colour figures. Colour figures may be published online free of charge; however, the journal charges for publishing figures in colour in print. If the author supplies colour figures, they will be sent a Colour Work Agreement once the accepted paper moves to the production process. If the Colour Work Agreement is not returned by the specified date, figures will be converted to black and white for print publication.

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Early View article is fully citable and carries an online publication date and DOI for citations.

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When the article is published online:

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The link to the published article can be shared through social media.

The author will have free access to the paper (after accepting the Terms & Conditions of use, they can view the article).

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9. Editorial office contact details

For help with submissions, please contact: Vicki Pang, Senior Editorial Assistant (bjop@wiley.com) or phone +44 (0)1243 770 410.

Author Guidelines updated 10th April 2019

Appendix G: Questionnaire measures used in the current research

Peabody Treatment Progress Battery 2010

BMSLSS-PTPB: Youth

Your Satisfaction with Life

Please place an 'X' in the one box that best indicates how satisfied or dissatisfied you **CURRENTLY** are with each item below. There is no right or wrong answer.

	HOW SATISFIED OR DISSATISFIED ARE YOU WITH...	Very Dissatisfied	Somewhat Dissatisfied	Neither Satisfied Nor Dissatisfied	Somewhat Satisfied	Very Satisfied
1.	Your family life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Your friendships	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Your school experience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Yourself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Where you live	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Your life overall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please tell us your age (in years) and gender:

Age:

Gender:

Participant number:

PERCEIVED STRESS SCALE

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate by circling how often you felt or thought a certain way.

**0 = Never 1 = Almost Never 2 = Sometimes 3 = Fairly Often
4 = Very Often**

- | | | | | | |
|--|---|---|---|---|---|
| 1. In the last month, how often have you been upset because of something that happened unexpectedly? | 0 | 1 | 2 | 3 | 4 |
| 2. In the last month, how often have you felt that you were unable to control the important things in your life? | 0 | 1 | 2 | 3 | 4 |
| 3. In the last month, how often have you felt nervous and "stressed"? | 0 | 1 | 2 | 3 | 4 |
| 4. In the last month, how often have you felt confident about your ability to handle your personal problems? | 0 | 1 | 2 | 3 | 4 |
| 5. In the last month, how often have you felt that things were going your way? | 0 | 1 | 2 | 3 | 4 |
| 6. In the last month, how often have you found that you could not cope with all the things that you had to do? | 0 | 1 | 2 | 3 | 4 |
| 7. In the last month, how often have you been able to control irritations in your life? | 0 | 1 | 2 | 3 | 4 |
| 8. In the last month, how often have you felt that you were on top of things? | 0 | 1 | 2 | 3 | 4 |
| 9. In the last month, how often have you been angered because of things that were outside of your control? | 0 | 1 | 2 | 3 | 4 |
| 10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? | 0 | 1 | 2 | 3 | 4 |

Brief Daily Hassles Scale

These questions ask about day-to-day hassles. Record how often each one happened in the past month.

0 = never 1 = at least once per month 2 = at least once per week

3 = almost daily 4 = daily

1. Parents not trusting me	0	1	2	3	4
2. Parents trying to tell me how to live my life	0	1	2	3	4
3. Parents being strict	0	1	2	3	4
4. Having to lie to my parents	0	1	2	3	4
5. Worrying about my parents finding out about something	0	1	2	3	4
6. Parents not listening to my opinion	0	1	2	3	4
7. Being “put down” by a family member	0	1	2	3	4
8. Feeling unsafe in the community (outside school)	0	1	2	3	4
9. People not treating me with respect	0	1	2	3	4
10. Not being accepted by other people my age	0	1	2	3	4
11. Being bullied or teased	0	1	2	3	4
12. Not feeling safe at school	0	1	2	3	4
13. Trouble with group assignments	0	1	2	3	4
14. Trouble with lack of facilities (e.g., computers, sporting goods, books)	0	1	2	3	4
15. Feeling people are disappointment in me	0	1	2	3	4
16. Feeling stressed about exams	0	1	2	3	4
17. Feeling stressed about school work	0	1	2	3	4
18. Worrying about being judged on social media	0	1	2	3	4

Strengths and Difficulties Questionnaire

For each item, please mark the box for Not True, Somewhat True or Certainly True.
It would help us if you answered all items as best you can even if you are not absolutely certain or the item seems daft! Please give your answers on the basis of how things have been for you over the last six months.

	Not True	Somewhat True	Certainly True
I try to be nice to other people. I care about their feelings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am restless, I cannot stay still for long	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I get a lot of headaches, stomach-aches or sickness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I usually share with others (food, games, pens etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I get very angry and often lose my temper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am usually on my own. I generally play alone or keep to myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I usually do as I am told	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I worry a lot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am helpful if someone is hurt, upset or feeling ill	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am constantly fidgeting or squirming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have one good friend or more	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I fight a lot. I can make other people do what I want	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am often unhappy, down-hearted or tearful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other people my age generally like me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am easily distracted, I find it difficult to concentrate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am nervous in new situations. I easily lose confidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am kind to younger children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am often accused of lying or cheating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other children or young people pick on me or bully me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I often volunteer to help others (parents, teachers, children)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think before I do things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I take things that are not mine from home, school or elsewhere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I get on better with adults than with people my own age	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have many fears, I am easily scared	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I finish the work I'm doing. My attention is good	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Participant number:

TEIQue-ASF

Instructions: Please answer by putting a circle around the number that best shows how much you agree or disagree with each sentence below. If you strongly disagree with a sentence, circle a number close to 1. If you strongly agree with a sentence, circle a number close to 7. If you're not too sure if you agree or disagree, circle a number close to 4. Work quickly, but carefully. There are no right or wrong answers.

	Disagree						Agree
	1	2	3	4	5	6	7
1. It's easy for me to talk about my feelings to other people.	1	2	3	4	5	6	7
2. I often find it hard to see things from someone else's point of view.	1	2	3	4	5	6	7
3. I'm a very motivated person.	1	2	3	4	5	6	7
4. I find it hard to control my feelings.	1	2	3	4	5	6	7
5. My life is not enjoyable.	1	2	3	4	5	6	7
6. I'm good at getting along with my classmates.	1	2	3	4	5	6	7
7. I change my mind often.	1	2	3	4	5	6	7
8. I find it hard to know exactly what emotion I'm feeling.	1	2	3	4	5	6	7
9. I'm comfortable with the way I look.	1	2	3	4	5	6	7
10. I find it hard to stand up for my rights.	1	2	3	4	5	6	7
11. I can make other people feel better when I want to.	1	2	3	4	5	6	7
12. Sometimes, I think my whole life is going to be miserable.	1	2	3	4	5	6	7
13. Sometimes, others complain that I treat them badly.	1	2	3	4	5	6	7
14. I find it hard to cope when things change in my life.	1	2	3	4	5	6	7
15. I'm able to deal with stress.	1	2	3	4	5	6	7
16. I don't know how to show the people close to me that I care about them.	1	2	3	4	5	6	7
17. I'm able to "get into someone's shoes" and feel their emotions.	1	2	3	4	5	6	7
18. I find it hard to keep myself motivated.	1	2	3	4	5	6	7
19. I can control my anger when I want to.	1	2	3	4	5	6	7
20. I'm happy with my life.	1	2	3	4	5	6	7
21. I would describe myself as a good negotiator.	1	2	3	4	5	6	7
22. Sometimes, I get involved in things I later wish I could get out of.	1	2	3	4	5	6	7
23. I pay a lot of attention to my feelings.	1	2	3	4	5	6	7
24. I feel good about myself.	1	2	3	4	5	6	7
25. I tend to "back down" even if I know I'm right.	1	2	3	4	5	6	7
26. I'm unable to change the way other people feel.	1	2	3	4	5	6	7
27. I believe that things will work out fine in my life.	1	2	3	4	5	6	7
28. Sometimes, I wish I had a better relationship with my parents.	1	2	3	4	5	6	7
29. I'm able cope well in new environments.	1	2	3	4	5	6	7
30. I try to control my thoughts and not worry too much about things.	1	2	3	4	5	6	7

Participant number:

Appendix H: Domains and facets of TEI represented on the TEIQue-ASF

Domains and facets of TEIQue-ASF, adapted from Petrides (2009)

Domain of TEI	Facets	High scorers perceive themselves as...
Well-being	<i>Trait happiness</i>	...cheerful and satisfied with their lives.
Well-being	<i>Trait optimism</i>	...confident and likely to “look on the bright side” of life.
Well-being	<i>Self-esteem</i>	...successful and self-confident.
Self-control	<i>Emotion regulation</i>	...capable of controlling their emotions.
Self-control	<i>Impulse control</i>	...reflective and less likely to give in to their urges.
Self-control	<i>Stress management</i>	...capable of withstanding pressure and regulating stress.
Emotionality	<i>Emotion perception (self and others)</i>	...clear about their own and other people’s feelings.
Emotionality	<i>Emotion expression</i>	...capable of communicating their feelings to others.
Emotionality	<i>Relationships</i>	...capable of having fulfilling personal relationships.
Emotionality	<i>Trait empathy</i>	...capable of taking someone else’s perspective.
Sociability	<i>Assertiveness</i>	...forthright, frank, and willing to stand up for their rights.
Sociability	<i>Social awareness</i>	...accomplished networkers with excellent social skills.
Sociability	<i>Emotion management (others)</i>	...capable of influencing other people’s feelings.
Global measure only	<i>Adaptability</i>	...flexible and willing to adapt to new conditions.
Global measure only	<i>Self-motivation</i>	...driven and unlikely to give up in the face of adversity.

**Appendix I: Confirmation of ethical approval granted by Coventry University
Research Ethics Committee**



Certificate of Ethical Approval

Applicant:

Rhiannon Bill

Project Title:

An investigation into the role of trait emotional intelligence in buffering against the negative impact of stress on mental health in adolescents.

This is to certify that the above named applicant has completed the Coventry University Ethical Approval process and their project has been confirmed and approved as Medium Risk

Date of approval:

15 January 2018

Project Reference Number:

P63630

Appendix J: Gatekeeper email template

Dear [*identified gatekeeper*]

Thank you for taking the time to read this email. I would be grateful if you could also pass this information on to the head teacher.

I recently spoke to you [*or other member of staff if applicable*] on the phone to invite your school to take part in research looking at the role of emotional intelligence in protecting adolescents from negative impacts of stress on their mental health/emotional wellbeing. It is anticipated that the research will increase our understanding of the role of emotional intelligence in adolescent mental health. This could have implications for interventions that aim to improve adolescent wellbeing, for example school based interventions.

I am currently training to qualify as a Clinical Psychologist on the Coventry and Warwick University Clinical Psychology Doctorate course. This research project will form part of my doctoral thesis. The research is supervised by Dr Lesley Pearson, Senior Lecturer in Clinical Psychology at Coventry University, Dr Magdalena Marczak, Lecturer in Clinical Psychology and Dr Claire Middle, Lead Psychologist for Herefordshire CAMHS. Coventry University Ethics Committee has granted ethical approval for the research to be carried out.

Please do let me know if your school would like to support us with this research. This would involve:

- Helping us to recruit adolescents to take part by identifying classes who could participate.
- Sending some information and consent forms to their parents for us.
- Helping us to collect data by arranging a time in the school day when I could visit to give adolescents questionnaires to complete (this is likely to take 45 minutes).
- Having a named person that I could liaise with and pass any safeguarding concerns on to should they arise during the course of this research.
- We would require written consent from the head teacher to recruit from your school.

I have attached parent and participant information sheets and consent forms to provide some further information about this research. Please let me know if you would like any more information or to arrange a time to speak on the phone.

I look forward to hearing from you.

Best wishes,

Rhiannon Bill
Trainee Clinical Psychologist
Coventry and Warwick University Clinical Psychology Doctorate

Appendix K: Parent information sheet

Note: Printed on University headed paper

The role of emotional understanding in the relationship between stress and mental health in adolescents

Information about the research

Adolescents experience a range of stresses which can impact their emotional wellbeing. It is important to identify factors which can help protect them from the negative impacts of stress and support their wellbeing. This research is looking at the role of emotional understanding in helping adolescents to cope with stress.

This research is being carried out by Rhiannon Bill, Trainee Clinical Psychologist (lead researcher). It is supervised by Dr Lesley Pearson, Senior Lecturer in Clinical Psychology at Coventry University, Dr Magdalena Marczak, Lecturer in Clinical Psychology and Dr Claire Middle, Lead Psychologist for Herefordshire CAMHS. Your child's school is supporting this research by helping us to recruit participants and enabling us to visit the school to collect data. Rhiannon is liaising with [*insert gatekeeper's name*] at your child's school.

Why has my child been chosen to take part?

Adolescents can take part in this research if:

- They are aged between 11 and 18 years
- They attend one of the secondary schools or colleges that has agreed to support this research
- They can read English (in order to complete questionnaires)

Does my child have to take part?

Your child does not have to take part in the research. If you and your child agree to take part, you can still change your mind at any time and you can withdraw your child from the study up to 2 weeks after they have completed their questionnaires. If you decide to withdraw your child, all of their information will be removed from the research and will be destroyed. Please let Rhiannon know if you change your mind.

What will my child have to do?

Rhiannon is in contact with your child's school to arrange a time to visit with a set of questionnaires that ask about stress, emotional understanding and mental health/wellbeing. [*Give date of school visit if available*]. Your child will also be asked to write their age and gender on their forms. These questionnaires usually take up to 40 minutes to complete in total, and will be completed at the same time as other adolescents from your child's school who have chosen to take part. Rhiannon will be present to answer any questions your child might have and to make sure that their responses remain confidential.

What will happen to the information my child will provide?

Once your child has completed their questionnaires, Rhiannon will collect all questionnaires and will make them anonymous. Your child will be allocated a unique number that will be recorded on their questionnaire, so that Rhiannon can identify them if you or your child decide that you would like their information to be withdrawn. Their questionnaire scores will be input into an electronic database and collated with data collected from other adolescents.

All of your child's information will be stored securely. Written forms will be stored in a locked cabinet at Coventry University for the duration of the research. Electronic data will be password protected. Your child's information will be kept for 5 years after the completion of the research on secure Coventry University premises. After this time, it will be destroyed in accordance with Coventry University policy.

The findings of this research will form part of Rhiannon's doctoral thesis which will be submitted to the University of Coventry and Warwick as part of her Clinical Psychology Doctorate course. The findings may be reported in publications, articles or presentations.

In order to keep your child safe, if they disclose any information that leads Rhiannon to be concerned that they or anyone else are at risk of harm, Rhiannon will inform the school. The school will follow their usual procedures for addressing such concerns.

What if I am unhappy or would like to complain?

If you are not happy with this research or would like to make a complaint, please let us know.

You can contact Rhiannon Bill or Dr Lesley Pearson (details below). If you would prefer to speak with someone independent from the research, please contact Professor Olivier Sparagano, Associate Pro-Vice-Chancellor at Coventry University using the contact details below.

Who has reviewed this research study?

This study has been reviewed by Dr Lesley Pearson, Dr Magdalena Marczak and Dr Claire Middle. Coventry University Ethics Committee has granted ethical approval for the research to be carried out.

Who can I contact for support or more information?

Responding to questions about stress and mental health/ wellbeing can bring up difficult thoughts or feelings. Your child will be given debriefing information with details of local mental health/ emotional wellbeing support that they can use if they need any support with this.

If you have any further questions about this research, please contact Rhiannon Bill.

Contact details

Rhiannon Bill (Lead Researcher)
Trainee Clinical Psychologist
Email: billr@uni.coventry.ac.uk

Dr Lesley Pearson
Senior Lecturer in Clinical Psychology
Email: ab3840@coventry.ac.uk

Appendix L: Parent consent form

Professor Olivier Sparagano
Associate Pro-Vice-Chancellor
email: olivier.sparagano@coventry.ac.uk

Appendix I: Parent consent form

Note: Printed on University headed paper

The role of emotional understanding in the relationship between stress and mental health in adolescents

Parent Consent Form

Please initial each box:

1. I have read and understood the parent information sheet and all of my questions have been answered to my satisfaction. ☐
2. I understand that my child's participation is voluntary and they do not have to take part. My child or I can withdraw from the research up to 2 weeks after they have completed the questionnaires without having to give a reason. If my child or I decide not to take part or to withdraw from the research, there will be no consequences and all of my child's information will be removed from the research. ☐
3. I understand any information my child gives will stay anonymous and my child will not be identified or named. ☐
4. I understand that in order to keep my child safe, if Rhiannon has any concerns that my child is at risk of harm to him/ herself or others, she will inform the school. The school will follow their usual procedures for addressing such concerns. ☐
5. I understand that the information my child gives on their questionnaires may be used anonymously in future reports, publications, articles or presentations and the research will be submitted as part of a doctoral thesis to Coventry and Warwick Universities. ☐
6. I agree that my child can take part in this research. ☐

Name of Child:

Name of Parent

Parent's signature

Date

Name of Researcher

Researcher's signature

Date

Appendix M: Participant information sheet

Note: Printed on University headed paper

The role of emotional understanding in the relationship between stress and mental health in adolescents

Information about the research

We know that adolescents experience a range of stresses which can affect their emotional wellbeing. It is important to understand what helps young people to cope with stress in order to provide the best support to adolescents. This research project is looking at the role of emotional understanding in helping adolescents to cope with stress.

This project is being carried out by Rhiannon Bill, Trainee Clinical Psychologist (lead researcher). It is supervised by Dr Lesley Pearson, Senior Lecturer in Clinical Psychology at Coventry University, Dr Magdalena Marczak, Lecturer in Clinical Psychology and Dr Claire Middle, Lead Psychologist for Herefordshire CAMHS. Your school is helping us to find people to take part and is arranging for Rhiannon to visit your school for this project.

_____ has been helping Rhiannon with this.

Why have I been chosen to take part?

We are looking for people to take part who:

- Are aged between 11 and 18 years
- Attend one of the secondary schools or colleges that has agreed to help out with this research
- Can read English (to complete questionnaires)

Do I have to take part?

You do not have to take part in this research. If you agree to take part then change your mind, you can let Rhiannon know for up to 2 weeks after you have completed your questionnaires. Rhiannon will then remove all of your information from the research and destroy it.

What will I have to do?

Rhiannon will visit you and other people taking part in this research at your school. She will give you a set of questionnaires that ask about stress, emotional understanding and mental health/ wellbeing. You will also be asked to write your age and gender on your forms. The questionnaires usually take up to 40 minutes to finish altogether. Rhiannon will be present to answer any questions you have and to make sure that your responses stay confidential.

What will happen to the information I will provide?

Once you have completed your questionnaires, Rhiannon will collect them and make them anonymous. You will be given a unique number that will be written on all of your questionnaires, so that Rhiannon can identify them if you decide that you would like your information to be removed from the research. Your questionnaire scores will be put onto an electronic database along with other people's scores.

All of your information will be kept securely. Your questionnaires and forms will be locked in a cabinet at Coventry University. Electronic data will be protected with a password. After 5 years, all the research data and forms will be destroyed in accordance with Coventry University policy.

The findings of this research will form part of Rhiannon's doctoral thesis which will be handed in to Coventry and Warwick Universities as part of her Clinical Psychology Doctorate course. The findings may be reported in publications, articles or presentations.

In order to keep you safe, if you tell Rhiannon anything or write anything on your questionnaires that lead her to be worried about your safety or anyone else's safety, Rhiannon will inform your school. Your school will follow their usual procedures to address any concerns.

What if I am unhappy or would like to complain?

If you are not happy with this research or would like to make a complaint, please let us know.

You can contact Rhiannon Bill or Dr Lesley Pearson. If you would prefer to speak with someone independent from the research, please contact Professor Olivier Sparagano, Associate Pro-Vice-Chancellor at Coventry University using the contact details below.

Who has reviewed this research study?

This study has been reviewed by Dr Lesley Pearson, Dr Magdalena Marczak and Dr Claire Middle. Coventry University Ethics Committee has granted ethical approval for the research to be carried out.

Who can I contact for support or more information?

Responding to questions about stress and mental health/ wellbeing can bring up difficult thoughts or feelings. When you complete your questionnaires, Rhiannon will give you information with details of local mental health/ emotional wellbeing support that you can use if you need any support with this.

If you have any further questions about this research, please contact Rhiannon Bill.

Contact details

Rhiannon Bill (Lead Researcher)
Trainee Clinical Psychologist
Email: billr@uni.coventry.ac.uk

Dr Lesley Pearson
Senior Lecturer in Clinical Psychology
Email: ab3840@coventry.ac.uk

Professor Olivier Sparagano
Associate Pro-Vice-Chancellor
email: olivier.sparagano@coventry.ac.uk

Appendix N: Participant assent form

Note: Printed on University headed paper

The role of emotional understanding in the relationship between stress and mental health in adolescents

Adolescent Assent Form

Please initial each box:

7. I have read and understood the information sheet and all of my questions have been answered to my satisfaction. ☐
8. I understand that my participation is voluntary and I do not have to take part. I can withdraw from the research up to 2 weeks after I have completed the questionnaires without having to give a reason. If I decide not to take part or to withdraw from the research, there will be no consequences and all of my information will be removed from the research. ☐
9. I understand any information I give will stay anonymous and I will not be identified or named. ☐
10. I understand that in order to keep me safe, if Rhiannon has any concerns that I am at risk of harm to myself or others, she will inform the school. The school will follow their usual procedures for addressing such concerns. ☐
11. I understand that the information I give on my questionnaires may be used anonymously in future reports, publications, articles or presentations and the research will be submitted as part of a doctoral thesis to Coventry and Warwick Universities. ☐
12. I agree to part in this research. ☐

Name of Participant

Participant's signature

Date

Name of Researcher

Researcher's signature

Date

Appendix O: Participant consent form

Note: Printed on University headed paper

The role of emotional understanding in the relationship between stress and mental health in adolescents

Adolescent Consent Form

Please initial each box:

13. I have read and understood the information sheet and all of my questions have been answered to my satisfaction.

☐

14. I understand that my participation is voluntary and I do not have to take part. I can withdraw from the research up to 2 weeks after I have completed the questionnaires without having to give a reason. If I decide not to take part or to withdraw from the research, there will be no consequences and all of my information will be removed from the research.

☐

15. I understand any information I give will stay anonymous and I will not be identified or named.

☐

16. I understand that in order to keep me safe, if Rhiannon has any concerns that I am at risk of harm to myself or others, she will inform the school. The school will follow their usual procedures for addressing such concerns.

☐

17. I understand that the information I give on my questionnaires may be used anonymously in future reports, publications, articles or presentations and the research will be submitted as part of a doctoral thesis to Coventry and Warwick Universities.

☐

18. I agree to part in this research.

☐

Name of Participant

Participant's signature

Date

Name of Researcher

Researcher's signature

Date

Appendix P: Example debrief form

Note: Printed on University headed paper; information removed to prevent identification of participating schools

The role of emotional understanding in the relationship between stress and mental health in adolescents

Debrief Form

Thank you for taking part in this research study. The questionnaires you have completed will provide information about your experiences of stress, emotional understanding and your mental health/ emotional wellbeing. This information will help us to better understand whether different parts of emotional understanding help adolescents to cope with stress. This type of information helps to identify ways to support young people and improve their wellbeing.

What happens next?




You now have two weeks to inform us if you would like to remove your questionnaires from the study. To do this, please speak to [*insert school gatekeeper*]. They will inform the researcher (Rhiannon Bill) so that your questionnaires can be destroyed and not included in the research. You do not need to give a reason if you decide to withdraw.

Rhiannon is visiting several schools for people to complete questionnaires. Once all of the questionnaires have been completed, she will put the information together. She will do statistical analyses on the data to investigate whether different parts of emotional understanding help adolescents to cope with stress.

Rhiannon will write a report summarising the findings for a University assignment. She may also write a report to be submitted for a publication and write a report or deliver a presentation to give feedback to school staff and other interested professionals. Please be reassured that no personal or identifiable information will be included.

If you still have questions or need to talk to someone...

If taking part in this research has raised any difficult emotions for you, there are a number of people you can talk to.

-  You can talk to someone you trust at school or ask to speak with the school [*nurse/ counsellor*] service.
-  In [*county name removed*] there is a project called [*project name removed*] which supports young people with mental health/ emotional wellbeing. They can offer one-to-one support and provide information about different support services. They have lots of information on their website and a form to self-refer yourself. Their website is: [*URL removed*]
-  If you are worried about your mental health, you can also speak with your GP.

Thank you again for taking the time to complete the questionnaires.

Appendix Q: Histograms showing the distribution of scores for the main variables

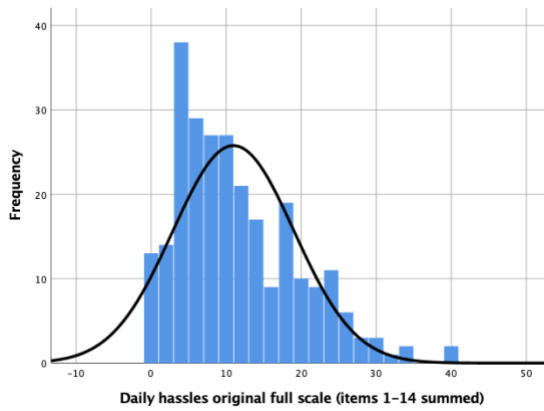


Figure A1 Histogram showing the distribution of daily hassles scores.

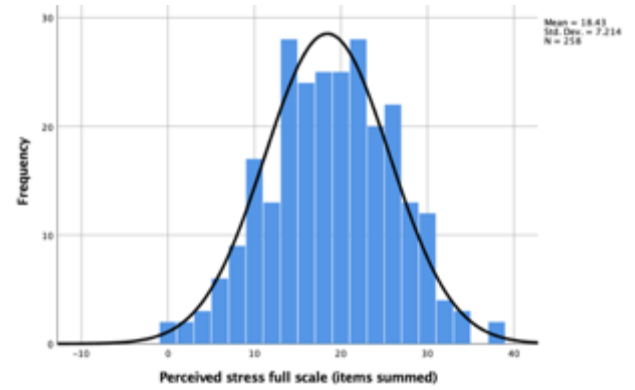


Figure A2 Histogram showing the distribution of perceived stress scores.

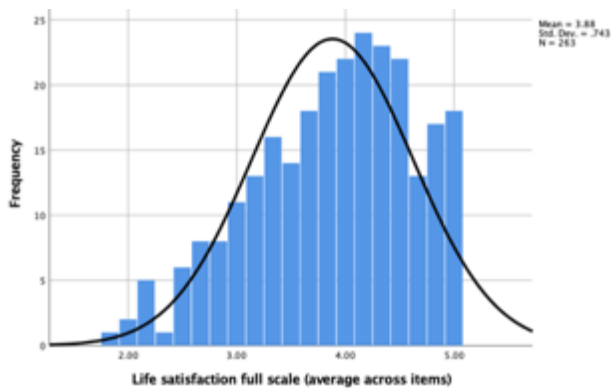


Figure A3 Histogram showing the distribution of life satisfaction scores.

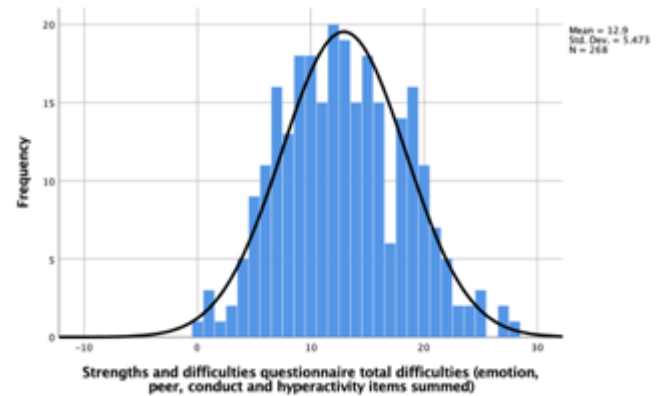


Figure A4 Histogram showing the distribution of SDQ total difficulties scores.

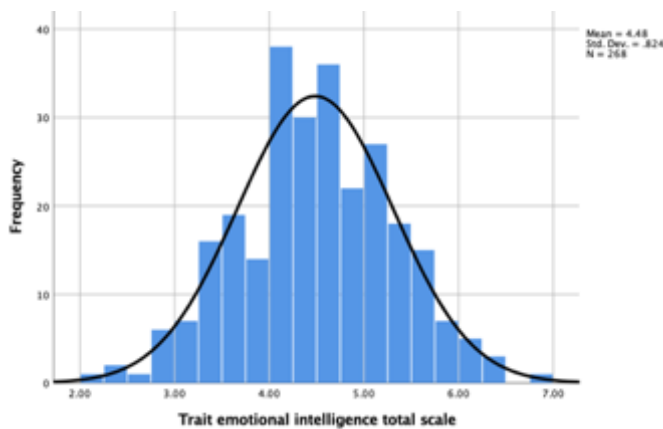


Figure A5 Histogram showing the distribution of TEI scores.